THE BUILDER

INCORPORATING

"ARCHITECTURE" AND "THE BRITISH ARCHITECT"

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PROFESSIONAL CONDUCT

THE Architects' Registration Council of the United Kingdom has set itself a very difficult task in formulating a written Code of Professional Conduct for the guidance of all registered architects. The strength of the Council in this matter is by no means assured, and differs from that of the Council of a professional Society in that it can operate only within the terms of an Act of Parliament.

The actual terms of the Act may appear at first sight to be amply wide and to leave an almost complete discretion to the Council, but it is by no means clear how far that discretion would be supported in an action in the Courts. The main difficulty is, of course, to define in professional conduct the narrow margin between the illegal and the inappropriate. For instance, it is difficult to argue that while a man who sells groceries may advertise his wares and services to secure custom, without breach of the law, one who sells his abilities to design and direct building commits an offence by any such action. Yet it is quite obvious that no architect of standing would fail to regard it as reprehensible, although there still remain more subtle means of self-advertisement to which some are still unfortunately prone.

But it is difficult to imagine that the law would operate to take away a man's means of livelihood for an offence more foolish than disgraceful. What, then, is the purpose of framing such a rule, if rule it is? Presumably it would rank as unprofessional, rather than disgraceful conduct, and as such be a ground for censure rather than expulsion. The point then arises as to the form in which any such censure would be made. If any such finding were published it would be of a very damaging nature to the culprit, and the Council would have to act very warily if its findings were to stand without fear of disturbance. If, on the other hand, such findings were private, the disciplinary effect would be negligible to all but the sensitive.

The conclusion to be drawn from such reflections might thus be that the Code is superfluous, and might safely be left to the unstatutory professional bodies were it not for the fact that in the initial operation of the Act a considerable body of men have been admitted to the profession who may have had little experience of professional fellowship and less of professional discipline. Their existence is a temporary phase until the significance of the Act assumes its full effect, but the term of their existence is too distant in prospect for their conduct to be left without control. The Code makes this very apparent in its dispensation to those Architect-Estate Agents who were in business as such before the material date.

In the light of these reflections, the Code becomes less open to criticism as an expedient necessary to conditions created by the initiation of an Act which was subject to the vigorous opposition of many vested interests. As such it at least tends to prevent a serious legal anomaly whereby one section of the profession would be enabled to operate within the law without the self-imposed restrictions under which the organised section is bound.

But, despite these admirable and indeed almost inevitable intentions, the general tenor of the Code leaves something to be desired. The Registration Council is a Statutory Body administering an Act of Parliament, and as such must be as precise as possible. While recognising the difficulty of exactly defining what is really a traditional state of mind in the profession rather than a set of prescribed rules, it is a little disappointing to find the Code, in many respects, less definite than the Institute Code, upon which it has obviously been based.

The preamble to the Code in itself does much to offset such precision as the rules themselves possess, and it might have been better had a general rule been drafted to cover the many contingencies that are bound to arise. One or other method is, of course, essential if the unmentioned offences are not to receive a tacit blessing, but it would have been more consistent with the functions of a statutory body if conduct inconsistent with the functions and responsibilities of an architect were specifically made an offence, rather than the somewhat vague commentary upon which the Council leaves itself free to act in such matters.

The division of the document into two parts devoted to "Principles" and "Examples" is also somewhat inadequate and untidy, particularly in relation to the amount of repetition this form involves. A comprehension of the principles of professional rectitude is a matter of the inner conscience. Those who have it need no guidance, while those who have not are likely to be little impressed by a catalogue of what they should or should not do. On the other hand, whereas the architect of repute needs no rule book, precise stipulations as to what the law will not allow him to do while he continues to use the honoured style of "architect" are vitally necessary to discipline those who have not the natural instinct for propriety. We feel, then, that the Code would have assumed more useful and powerful form had it been framed simply as a list of rules, including some of the matters which are dealt with as "examples."

As the matter stands, the document gives an impression that the Council itself is not very confident as to its own powers and terms of reference, and that, in our opinion, is to produce a somewhat unfortunate effect, since it might give confidence to those who admit no other obligation than that of not being found out.

It is to be noted also that one important omission from the Code as compared with that of the Institute is that governing the conditions of Architectural Competitions. This is probably inevitable and need not be of much concern.

It is unfortunate that the deliberations of the Registration Council cannot receive the same consideration in advance as is given by the professional societies to their own memberships. That, of course, is not the fault of the Council, but arises entirely out of a difference in function. The fact remains, however, that a document has been sanctioned which lacks the perfection at which the legislator aims, and it is to be hoped that the opportunity will arise before long for a general improvement of the form and substance of the Code.

NOTES AND NEWS

Housing Delay.

A CORRESPONDENT writes: An example of one reason why housing is delayed has been given me by the Clerk of a well-known local authority in the south of England. This Council decided to build six cottages on a site already in their possession. The Minister of Health instructed them to obtain tenders. The lowest tender from a local builder was for about £1,100 for each house. Two outside builders put in tenders for about £1,400 each house. The Council accepted the lowest tender, but the Ministry of Health refused to agree and gave instructions that each builder should be asked to build two houses so as to spread the labour. Fresh tenders were obtained. The three builders gave a price of approximately £1,300 for each house. The Ministry of Health will not approve on the grounds that this is too high. Four months have already slipped by, and the houses still exist only on paper.

Regent's Park Terraces: Official Inquiry.

BECAUSE of war damage and the effect of war conditions on the general state of the houses designed by John Nash in the terraces adjoining Regent's Park, which form part of the Crown's Regent's Park estate, it has become necessary for the Government to consider the future of these terraces. The Prime Minister has accordingly appointed a committee with the following terms of reference:—

"To consider the future of the terraces adjoining Regent's Park from all aspects, architectural, town planning and financial, and to make recommendations as to their future adaptation or replacement to meet modern requirements."

The committee will be composed as follows:—Lord Gorell (chairman), Mrs. I. M. Bolton, Sir Edward Forber, Mr. J. H. Forshaw, Sir Eric Maclagan, Sir Drummond Shiels, and Mr. J. A. F. Watson, J.P., F.S.I. Mr. A. N. Coleridge will act as secretary, and communications for the committee should be addressed to him at the Cabinet Office, Great George-street, S.W.1.

New Year Honours.

IN addition to the list of recipients of New Year Honours already given in our columns are the following awards to members of the building industry: *O.B.E.*: Mr. R. O. Lloyd, past-president, Liverpool, Birkenhead and Wirral Districts Employers' Association; Mr. B. F. Dyke, F.S.I., Chief Surveyor, Admiralty. *M.B.E.*: Mr. Ronald Carswell, A.R.I.A.S., L.R.I.B.A., Assistant Architect, Department of Health for Scotland; Mr. John Chadwick, A.M.Inst.C.E., Bury Borough Surveyor; Mr. S. M. Evans, A.R.I.B.A.; Mr. E. C. Higman, L.R.I.B.A.; Mr. K. M. Winch, F.R.I.B.A., hon. architect to Incorporated Soldiers', Sailors' and Airmen's Help Society; and Mr. A. Llewellyn Smith, A.R.I.B.A., for services to civil defence in India.

Lecturers Wanted.

THE R.I.B.A., we are informed, is constantly receiving inquiries for lectures from schools, institutes, service groups and units, civic and village societies, etc., on general architectural subjects which it is at present quite unable to meet. It is thought that there will be many architects and others being released from the Forces who have had a good deal of experience in giving lectures and talks who might care to offer their services in this connection. Evening and week-end lecturers are needed in addition to those who can spare an occasional afternoon. There is a wide field of opportunity in this direction, and the Secretary of the Lectures Committee will be very glad to hear from any volunteers who should write direct to the R.I.B.A., 66, Portland-place, W.1. Intending lecturers will be interested to know that the Institute now has a collection of some 500 topical architectural photographs specially prepared for their use, particulars of which can be had on application.

The "Tite" and "Victory," 1946.

The preliminary competition for the Tite Prize will be held in London and at centres in the provinces on Wednesday, March 13. The closing date for the submission of forms of application is February 15 next. Forms of application for admission to the competitions may be obtained at the R.I.B.A., 66, Portland-place, London, W.1.

Scottish Special Housing Association.

THE Secretary of State for Scotland invites applications for nomination to the post of Chairman of the above Association (Headquarters, Edinburgh). The successful candidate will be required to devote his full time to the work of the Association and will be appointed for a minimum period of three years at a salary of £3,000 per annum. Age limits, 35-55. Qualifications required are experience in large-scale production, preferably with a knowledge of building and civil engineering technique, and also administrative experience and organising ability of a high order. Form of application may be obtained from the Establishment Officer, Department of Health for Scotland, St. Andrew's House (Room 31), Edinburgh, 1. Closing date for applications, February 9.

Herts Power Station Scheme Opposed.

OPPOSITION to a proposal to build an electricity power station in Hertfordshire, at a cost expected to exceed £5,000,000, is the subject of a memorandum submitted to Hoddesdon Urban District Council by the clerk, Mr. A. R. Kerrell-Vaughan. The site selected for the station is in the Rye Park area, and the memorandum suggests that as a matter of principle a protest must be registered against the erection of a building to a height of 250ft., which will eventually comprise five cooling towers and two chimneys in the Lea Valley, a mainly residential district, with natural amenities which have been enjoyed by large numbers of people since time immemorial.

West Riding County Architect.

AFTER 40 years in the service of the West Riding County Council, the last 25 years as County Education Department architect, Mr. H. Wormald, of Leeds, retired at the end of December. In paying a tribute to his work, County Alderman Hyman, Chairman of the Education Committee, said that many beautiful schools in the West Riding would long remain as memorials to Mr. Wormald.

Essex Deputy County Architect.

ESSEX County Council has confirmed the appointment of Mr. Denis Senior, A.R.I.B.A., as Deputy County Architect. Mr. Senior was previously Chief Assistant Architect in the County Architect's Department.

West Sussex Deputy County Architect.

WEST SUSSEX County Council has approved the creation of the post of Deputy County Architect at a salary of £750 per annum, rising to £1,000 per annum, and Mr. J. Catchpole, A.R.I.B.A., has been appointed to this post as from December 1. The post of County Architect has not yet been filled.

Professional Announcements.

MR. F. STANLEY GRIFFITH, F.S.I., F.I.A.S., chartered quantity surveyor, has taken into partnership Mr. Robert Caira, F.I.A.S., for very many years a member of his staff. The practice will be carried on at 36, Victoria-street, Westminster, S.W.1 (tel.: Abbey 3346 and 4740), under the name of Stanley Griffith and Partners.

MR. G. STUART FRAZIER, F.S.I., and MR. C. MORGAN SILK, F.S.I., of 35, Portland-road, Edgbaston, Birmingham 16, and 6, the Quadrant, Coventry, announce that as from January 1, Mr. Henry J. Matthews, F.S.I., has joined them in partnership, having been with the firm for a period of 26 years. The name of the firm will remain unaltered.

MESSRS. ANDREWS & WINTON-LEWIS, A.R.I.B.A., chartered architects, surveyors, of 37, West-street, Brighton, Sussex, announce that they have taken additional offices at 12, City-road, Finsbury-square, London, E.C.1. They will be pleased to receive catalogues.

MR. PETER H. CASPARI, M.Inst.R.A., has been released from War Service and has now re-opened his practice at temporary premises, No. 7, Abercorn-mews, Violet Hill, N.W.8 (tele.: Maida Vale 5119), where he would appreciate trade catalogues.

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COMING EVENTS

Friday, January 18.

HOUSING CENTRE. One-day Conference on "Public Services and Housing." 13, Suffolk-street, S.W.1. 10.30 a.m.

Monday, January 21.

CHARTERED SURVEYORS' INSTITUTION. Mock Arbitration. Great George-street, S.W.1. 5.30 p.m.

Wednesday, January 23.

LONDON MASTER BUILDERS' ASSOCIATION. Central Area No. 1 Meeting. Derry and Toms Restaurant, W.8. 2.15 p.m.

Thursday, January 24.

TOWN AND COUNTRY PLANNING ASSOCIATION. Conference in conjunction with British Social Hygiene Council on "Needs and Problems of the Family." B.M.A. House, Tavistock-square, W.C.1. 10.45 a.m. (continuing over Friday).

Mr. R. L. Nicholas on "The Manchester Plan." 28, King-street, W.C.2. 1.15 p.m. (lunch, 12.45 p.m.).

From *The Builder* of 1846

Saturday, January 17, 1846

SIR,—You would be doing the inhabitants of Regent-street and the public a great service by inspecting and exposing the botching manner in which the Office of Woods and Forests allowed the Quadrant to be built originally. . . . All the housekeepers, excepting five, wish the whole of the columns and terrace removed, and are willing to pay the cost.

A SUBSCRIBER TO THE "BUILDER."

THE LONDON PLAN
AND THE KENNINGTON AREA

BY H. V. LANCHESTER

THE position of the Duchy of Cornwall estate at Kennington, adjacent to the ring road, as proposed in the London County Council's plan, made it obvious that consideration should be given to its place in the general scheme, and H.M. Council consequently invited the technical advisers for the estate, Messrs. Holroyd F. Chambers, F.S.I., and Louis de Soissons, A.R.A., F.R.I.B.A., to prepare plans showing how the area could be related to the L.C.C. plan.* It seems probable that, starting from this more limited objective, it became apparent that a more comprehensive study, including the whole of the surrounding area, might be a valuable contribution to this section of the development scheme, and fully documented proposals have now been submitted for the whole of the Manor of Kennington, which occupies about one square mile east of the Thames between Westminster and Vauxhall Bridges.

The authors' proposals follow in their main lines the L.C.C. plan, but make a number of variations in detail, most of which may be accepted as improvements based on a closer study of conditions. This is a case in which it may be regarded as fully justifiable to propose revisions based on a review of the treatment of a particular area, where this does not in any way invalidate the principles embodied in the plan for London as a whole. It was, in fact, recognised that such a course was desirable as facilitating the implementation of the scheme and enhancing its local value while not detracting from the merits of the general layout. As a step bringing us nearer to the London of our desire, action on these lines must everywhere be welcomed, and the fact that this one comes from a body that is only to a limited extent entitled to submit it, should not detract from the credit which it deserves as an exposition of good planning.

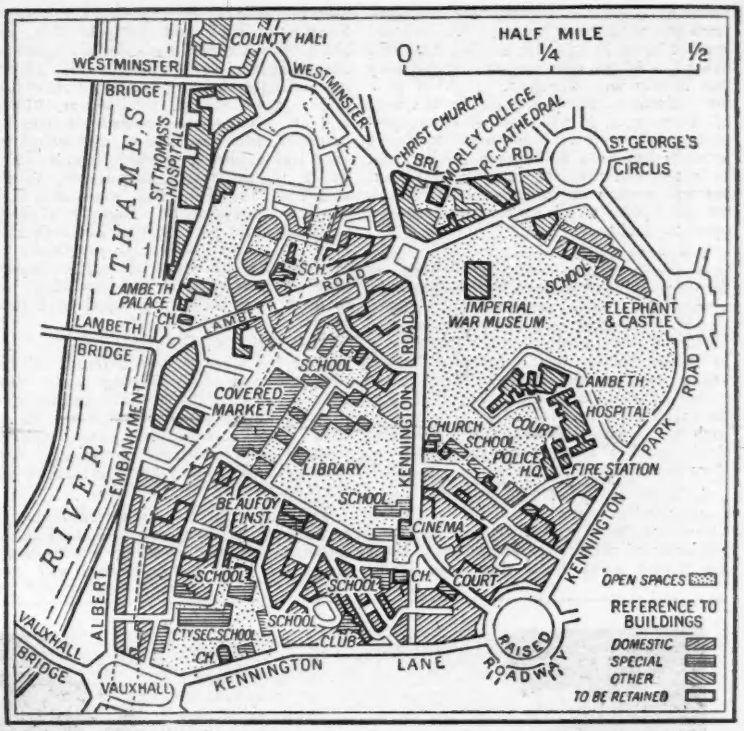
The fact that the existing development of the Cornwall Estate is fitted into the scheme as far as practicable cannot be the subject of adverse criticism, as the estate has for many years been noteworthy for the care that has been exercised in its housing and ancillary provisions; it would have been uneconomic not to have preserved all that was possible, and the same attitude has been taken towards other sound and recent building by public and other bodies, particularly as regards good and up-to-date housing; most of the buildings intended to be removed were erected prior to 1850 and are now obsolescent.

At present, industry occupies premises scattered over the whole area and wedged in haphazard between housing and other accommodation; it is suggested that eventually this should be gathered into three suitable locations, and the remainder freed from this drawback, following the system laid down in the L.C.C. report for London generally. This change is made almost inevitable by the extensive proportion of open space which is so badly needed in South London, and of which a large contribution can be secured from Kennington more economically than elsewhere.

Perhaps the most important factor in the problem of this district is that of the railway viaduct between Nine Elms and Waterloo, which in common with most of London's overhead lines, was proposed in the London plan to be brought down below the street level. Notwithstanding this recommendation, no programme has so far been submitted as to the method by which such a transposition should be effected; though, in some cases, these viaducts might be rendered superfluous by the supplementary routes proposed, in others, such as this one to Waterloo, they are not, and the assumption seems to be that they would be located in the same position as at present. Now, it is obviously impracticable to build a new line immediately under the existing one without removing the latter—a course which does not seem a possible one. As at Kennington, and elsewhere, most of the property close to the viaduct is earmarked for remodelling. The obvious course is to build the substituted line more or less parallel to the present one, and then to replan the area now occupied by this. At Kennington this could be done without any special difficulty a short distance to the east of the present viaduct with its terminal, if the line were not linked up with London Bridge, immediately to the south-east of the present Waterloo Station. The scope of the L.C.C. plan was so extended that it is hardly to be expected that it would cover operations of this type, but when a specific area comes to be dealt with in detail, as in this report on Kennington, it seems to be demanded that instead of leaving a factor of such importance in the air and assuming that the railway, whatever its level, will remain in its present position, the procedure for the change-over should have been visualised.

It is, of course, a matter for gratification to see by this and other indications, that the L.C.C. plan is not being pigeonholed, and is still regarded, together with other proposals, as a basis for future remodelling, but this plan itself is still in many aspects at a preliminary stage, one of these aspects being the planning of the railway system. The report itself did not claim finality on this point, and it is time that an expert committee took in hand the consideration of rail services in conjunction with transport as a whole. More statistical information is required, and very complex economic problems would have to be solved before the suggestions included in the report would be either justified or effectively revised.

The plan has been 2½ years before the public, the Greater London plan now supplements it, and the improvement of the City is under review; is it not time to provide for continuing the work by further examination of all the questions that are at present only at the stage of suggestions, or for which conclusive basic demands have not been made?



Plan by courtesy of *The Times*.

THE PLAN IN DETAIL

In view of the present restrictions on paper and publication the presentation of this scheme appears unnecessarily lavish, going beyond what was required to provide a clear and expressive definition of its aims. As, however, this did not involve a direct expenditure of public funds it is less open to criticism than might otherwise have been the case, and the result is certainly a very clear and detailed exposition of the problems involved and the solutions recommended. The more important features of the London County Plan, the widened Kennington Lane as a section of the "A" Ring Road and the large park surrounding the Imperial War Museum (formerly Bethlehem Hospital) and Lambeth Hospital, are retained, but a number of variations are made in other respects.

To simplify traffic organisation, St. George's Road is closed as a traffic route and the existing Kennington Road, which bisects the area from north to south, is adopted in preference to the formation of a new road in a straight line between the

* Plan for the North Lambeth and Southwark Redevelopment Area, prepared for H.M. Council of the Duchy of Cornwall by Holroyd F. Chambers, F.S.I., and Louis de Soissons, A.R.A., F.R.I.B.A., M.T.P.I.

terminal objectives; both these modifications seem to have value. A covered market area is substituted for Lambeth Walk, and the reservations for industry can hardly be challenged. In view of a new allocation of open space to the west of Kennington Road, that which at present exists east of the Lambeth Palace grounds has been taken over for housing. It is assumed that the railway to Waterloo will remain on its present alignment, an assumption which is, for some reasons, open to doubt.

The plans and schedules go very closely into the provision and distribution of housing and the consequent ancillary demands for such services as schools, nurseries, clinics, and the other requirements of residential groups. Housing is, as recommended in the London Report, dealt with as two-storey cottages, four-storey flats and a limited number of lofty flats with lifts, on sites facing open spaces, such as the river frontage. The comparatively modern housing on the Duchy of Cornwall estate is indicated as preserved.

A large group of schools with ample playground is planned around St. Peter's Church at the Vauxhall end of Kennington-lane; of course, the entrances to these are placed away from this main traffic artery. Further north, to the west of Kennington-road and between this and the proposed covered market, are grouped the buildings for a social centre, including halls for dancing and other entertainments, a restaurant, gymnasium, library and art school; two licensed premises are included; there are also a large swimming pool and extensive sports grounds. This group is, as nearly as possible, in the centre of the residential area and is in contact, north of St. Philip's Church, with the main park around Lambeth Hospital. Here and elsewhere practically all the existing buildings of public importance are embodied in the new plan, and in most cases skilfully grouped with those proposed in addition.

The very full documentation of the scheme has already been referred to; the schedules and accompanying plans deal, *inter alia*, with the age and condition of existing buildings, the present use of the sites, those occupied for public services, licensed and business premises, open spaces, buildings worthy of retention, and the final zoning of the area.

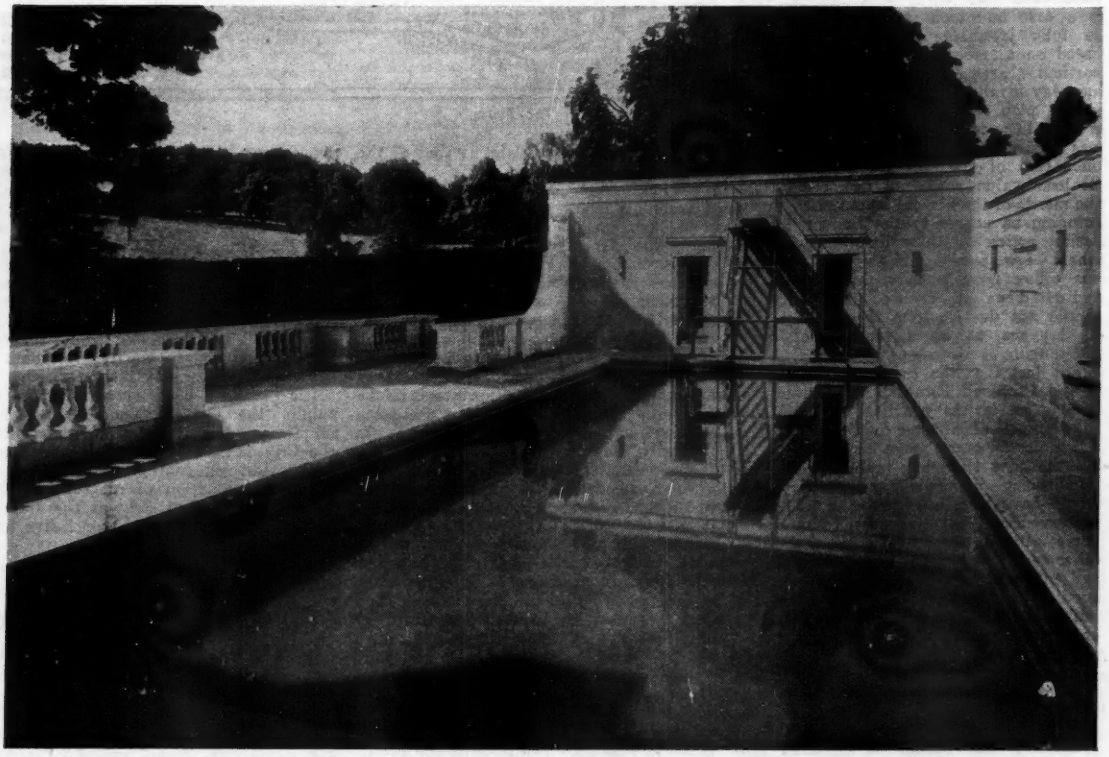
The main difficulty that would arise in putting the scheme into operation is the intensity of the existing development; there are over 200 industrial and commercial units, covering some 57 acres, while a much larger area is closely packed with small houses, making an orderly transfer of workers and residents very complicated. This is, of course, a problem that has to be faced in all comprehensive schemes for improvement, and it involves a programme for procedure by a series of stages. Careful studies have here been made as to the possibilities for residential accommodation, but the number to be displaced and by what stages this should be done is not made equally clear.

An Appointment.

MR. F. T. WEST has been appointed a full member of the board of Messrs. Trollope and Colls, Ltd., as from January 1. Mr. West, who has been with the company for 26 years, acted as a manager for some years, and in recent years has occupied the position of a technical director

An Air Pollution Survey.

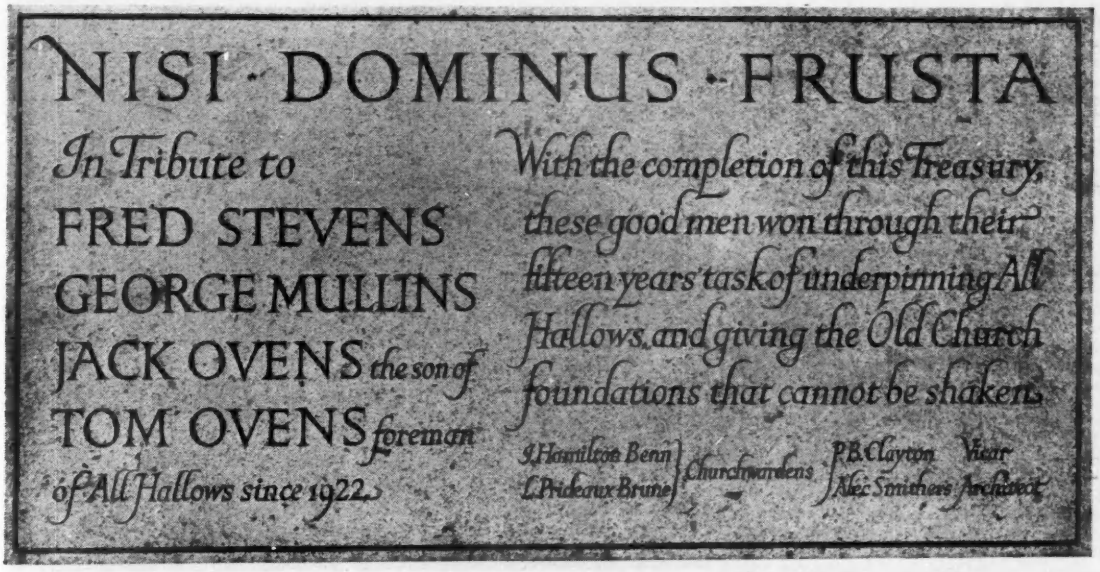
The report of the Leicester Air Pollution Survey, published by the Department of Scientific and Industrial Research, contains many interesting facts about the smoke menace in our industrial cities. It should be a useful guide to municipal authorities attempting to make towns cleaner.



SWIMMING POOL, GLOUCESTERSHIRE

MINOPRIO & SPENCELY, FF.R.I.B.A., ARCHITECTS

THE OWNER OF A LARGE COUNTRY HOUSE IN GLOUCESTERshire decided to pull down the ballroom—a beautiful room equipped for amateur theatricals and fitted with fine glass chandeliers—and build in its place an open-air swimming bath. The tank is of reinforced concrete lined with sky-blue glazed tiles and bordered by non-slip paving. The surrounding walls, balustrade and steps are of Bath stone. The former ante-room to the ballroom is retained, and some small rooms beneath the old organ loft have been adapted as changing rooms and lavatories; in front of them is the diving stage. Water is pumped from a stream which runs through the garden up to the boiler room, where it is filtered, warmed and circulated. The surface area of the water is 50 ft. by 20 ft. and the volume about 50,000 gallons. The builders were Messrs. Espley & Co., of Evesham.


NISI · DOMINUS · FRUSTA
In Tribute to
FRED STEVENS
GEORGE MULLINS
JACK OVENS the son of
TOM OVENS foreman
of All Hallows since 1922
With the completion of this Treasury,
these good men won through their
fifteen years' task of underpinning All
Hallows, and giving the Old Church
foundations that cannot be shaken.
J. Hamilton Benn
L. Prideaux Brune
Churchwardens
P. B. Clayton Vicar
Alec Smithers Architect

Panel cut in Hopton-wood for All Hallows, Barking, by Percy Smith, R.D.I. (See *this page*.)

AN OUTLINE OF ENGLISH ARCHITECTURE

THE old adage that supply, first created to meet a demand, itself helps to create a further demand, is amply confirmed by the output of books on English architecture and antiquities. Although so explicitly intended for the "general reader," this new work* by A. H. Gardner—Alfred Herbert, not to be confused with Arthur Gardner, writer on mediæval sculpture—will give pleasure to any architect or historical student. With its lavish photography it meets a definite want, and in its extensive review of contemporary work "kills two periods with one stone." Its general scheme, rising grandly above style-names, goes by centuries, a chapter to each, from the eleventh to the twentieth. Domestic architecture is fairly treated under each, about 67 out of the 154 figures being devoted to it, apart from inns and other secular works; the book might be called "the architecture of democracy," for a good proportion of humbler dwellings appears cheek by jowl with the stately mansions to which exclusively books were formerly devoted. The text is readable and the illustrations are remarkable less for new subjects than for arrestingly fresh views of old ones—*e.g.*, the revealing oblique view of Wells west front (fig. 26) and the interior of Fountains (23). In the captions are approximate dates, a boon to amateur and serious student alike; these are even given for cottages, notoriously undatable objects! Double dates for long-separated periods are not, however, always given (*e.g.*, fig 16). A fair selection of plans is also given in comparative groups.

Naturally, the question of preservation or its opposite—revived as a practical and urgent issue by Mr. Godfrey in "Our Building Inheritance"—receives oblique reference in a book of this sort. Useful as published records are views of buildings demolished, viz., Waterloo Bridge (fig. 115) and Lansdowne House (116-7), and of those destroyed or damaged in war, viz., St. Lawrence Jewry (111), and St. Michael's (40) and Ford's Hospital (73) at Coventry, besides Dawpool, by Norman Shaw (138), and a "l'art nouveau" café at Exeter (141). A building well shown in its lovely original state before shocking mutilation is the house in the market-place, St. Albans (fig. 3); the left-hand or southern half was obliterated by a shop front, the corner having been chopped off diagonally for the entrance, destroying its symmetry and apparent stability (see photo and protest by the author in *The Builder* of December 11, 1925); it has since been worsened by the glaring white front and fascia of an ironmongery combine.

There are a few factual errors on page 109 (paragraph 2). Welwyn Garden City plan, attributed to Sir Raymond Unwin and Mr. Barry Parker, is, of course, the work of Mr. Louis de Soissons, A.R.A., F.R.I.B.A., who interpreted the aims of Ebenezer Howard. The date "*c.* 1250" to the Westminster nave (fig. 30) is another. There are a good chronological summary (p. 115), a bibliography, and an index, forced, probably due to paper shortage, into minute type, but adequate for the purpose. H. V. M. R.

* *Outline of English Architecture.* An account for the general reader, etc. By A. H. Gardner, Associate R.I.B.A. Batsford, 1945. 12s. 6d. vi + 122 pp. + pls. (154 figs.).

Visit of Swedish Architect

MR. T. MUNTHE, of 2, Carlisle Mansions, Carlisle-place, London, S.W.1, who is acting as U.K. representative of the Swedish Timber-House Export Association of Stockholm, the group of leading manufacturers, informs us that Mr. O. Forssell, the Chief Architect of their Association, will arrive in London on Monday, January 21, for a month's visit. He will be accompanied by two of their engineers, Messrs. P. Herrmanu and H. Sandström, and the object of the visit is to study at some of the sites in Britain the erection of and other matters connected with the timber houses now being imported by the Government from Sweden.

Mr. Forssell is a leading expert on timber houses in Sweden and was the chief man during the technical discussions with the Ministry of Works' delegation in Stockholm last Spring.

GUILD OF MEMORIAL CRAFTSMEN

THE Guild of Memorial Craftsmen have prepared a booklet* illustrating examples of the work of their members which does justice to the high standards observed of design, choice of material and craftsmanship. There can regrettably be no doubt that memorial art in church, churchyard and, particularly, cemetery, has dropped in quality during the past century—for which imported stone and increased use of the machine are largely responsible. As Mr. Walter H. Godfrey, an hon. member of the Guild, says in a monograph contained in the booklet:—

"The rediscovery in recent times of both the quantity and the high quality of English workmanship of the memorials in our churches and churchyards has come as a surprise to many people, and not least to those who thought they knew something of our national achievement in the arts. Few of us had realised the riches that are to be found up and down the country, and the recognition of this wealth of beautiful designs and skilful execution has opened our eyes to the shortcomings of the work produced in the last century, shortcomings that are still too painfully evident in much of the commercial work of to-day. This enlightenment is salutary, but it will not be sufficient to enable us to regain the old mastery unless we can probe the causes of the decline and guard against the mistakes which are now so apparent. . . ."

The author concludes: "To-day perhaps our greatest problem lies in the fact that people are accustomed to these bad practices and their familiarity with them has formed a kind of bastard tradition. But if those who work for the Church stand firm to the true principles of their craft the better will again prevail. . . ." This booklet, with its many beautiful examples of current work, shows that craftsmen are still working to-day whose designs bear comparison with the best of the past. It is for those who commission to see that these men be given their chance.

* Obtainable from the Secretary, Guild of Memorial Craftsmen, c/o Central Institute of Art and Design, the National Gallery, W.C.2. Price 2s. 6d.

CONCRETE HOUSE IN "CONSLAB" CONSTRUCTION

P. M. POWELL, L.R.I.B.A., ARCHITECT. CHARLES WOODWARD, A.R.I.B.A., CONSULTING ARCHITECT

THE OBJECT OF THE "CONSLAB" FORM of construction, which is the invention of Major L. Shingleton, O.B.E., M.I. Struct.E., is to overcome the undoubted difficulties which will arise owing to shortage of bricklayers, and thus provide a method of building suitable for the employment of men without craft training and as a means of carrying out monolithic concrete construction in building or civil engineering work without the use of formwork. The name "Conslab" is a Registered Trade Mark, and this method of construction is fully patented Nos. 558,239, 564,447. The inventor has the benefit of his experience in constructing in concrete or partly in concrete houses for the London County Council after the last war, when shortage of bricklayers prevented satisfactory speed in housing.

Briefly, the method of construction is to use lightly reinforced precast external and internal slabs made of concrete or other suitable materials 1½ in. thick, of any convenient size but generally not exceeding 12 ft. super, between which ordinary, light-weight, or moisture-proof concrete filling is placed to form a wall of any desired thickness. The slabs to which the concrete filling adheres are left as part of the wall. It is considered that if rendered or rough-cast externally, crushed boiler clinker reinforced slabs for the exterior and interior would be satisfactory, and are lighter to handle.

It is found that slabs up to about 3 ft. 6 in. deep are satisfactory and reduce the number of attachments to scaffold. Owing to the rigidity of the slabs it is not necessary to have attachments to the scaffold at each corner in every case but at diagonally opposite corners only, again reducing attachments to scaffold. Distance rods which hold the slabs apart before and during filling become, after concreting, tie-rods and act as a reinforcement to the natural adhesion of the concrete to the precast slabs. The precast slabs are not bedded in any way and are held in position before concreting the filling by a simple arrangement on one side only from ordinary tubular scaffolding.

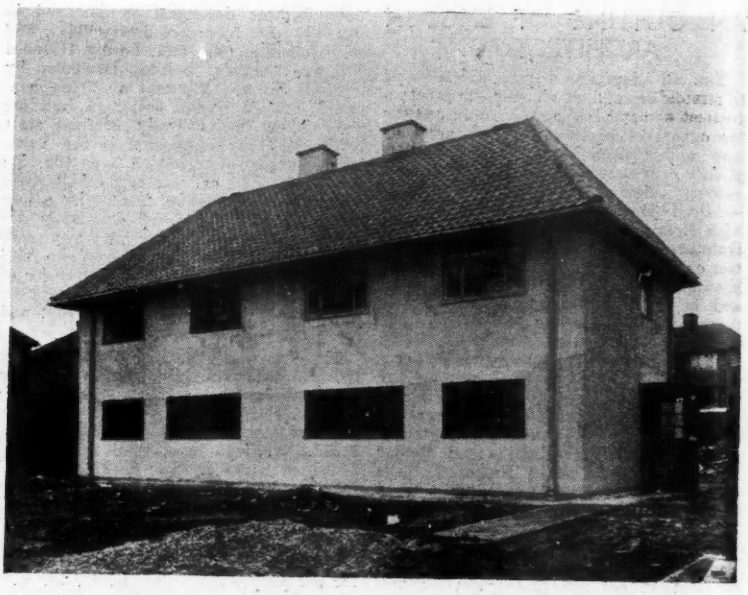
The scaffolding, which can be of a light standardised type for easy erection and dismantling, is also available for access to the work of other trades in the construction of the building. A light type of putlog clip only is required for securing the putlogs holding the attachments to slabs. By ensuring that the joints in the concrete filling do not coincide with the joints between the precast slabs it is claimed that any cracking due to expansion or contraction of the concrete filling that might occur will not in any case extend from face to face of a wall. Condensation internally is obviated by the use of crushed clinker or other material of an absorbent nature for the internal precast slabs.

Door and window openings are formed by using precast concrete or wood frames to any required section placed in position as the concreting proceeds and anchored to concrete filling. Flues are formed by using flue pipes placed in the concrete. By forming holes in the precast slabs and with a sleeve of suitable material through the concrete filling, any holes required can be left through a wall. It can be adapted to practically all designs of houses, including features such as bay windows and gable ends, without difficulty, but to obviate too many slabs of different sizes some degree of standardisation and multiples of same in regard to dimensions is advisable on any particular housing scheme.

A pair of houses to the plans of Mr. P. M. Powell, L.R.I.B.A., and in collaboration with the Ministry of Works, have been erected at Canons Park, by Messrs. Leslie and Co., Ltd., Kensington-square, W.8. The slabs in these houses have been standardised 3 ft. long by 1 ft. 9 in. deep, and the bulk of the slabs required are of this size. It is emphasised that this method of construction is traditional building, and only prefabricated in so far as the slabs and distance rods and ties are concerned. "Conslab" is a suitable method for erecting single-storey houses and, if required, at a later date, for adding further storeys on the existing walls and partitions.

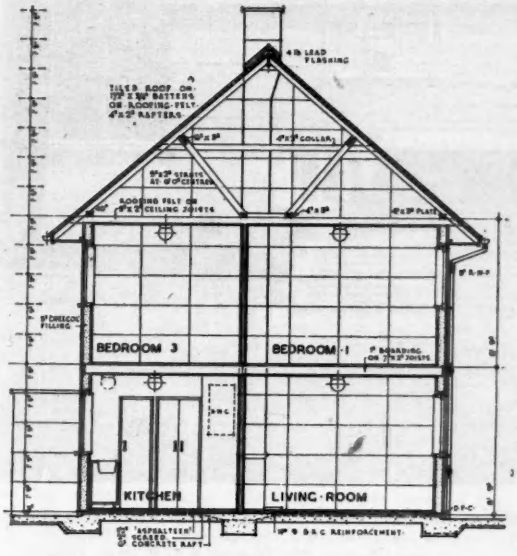
Each house of the pair illustrated has a frontage of 25 ft. and a depth of 22 ft. 1 in. externally, with a total floor area of approximately 1,000 ft. super per house. The slabs were made on the site at odd times during the progress of the site works, and were based on a unit size of 3 ft. by 1 ft. 9 in. by 1½ in. thick. The total number of slabs required approximated to 705 yards super. The external slabs were made of ⅜ in. shingle and sand, and the internal slabs of ⅜ in. crushed boiler clinker and sand, both to a 4 :2 :1 mix. The slabs were reinforced with galvanised wire mesh and cost approximately 5s. per yard super for labour and material. The quantity of concrete filling was approximately 50 yards cube in Cheecol

Above and below: VIEWS OF THE "CONSLAB" HOUSES.



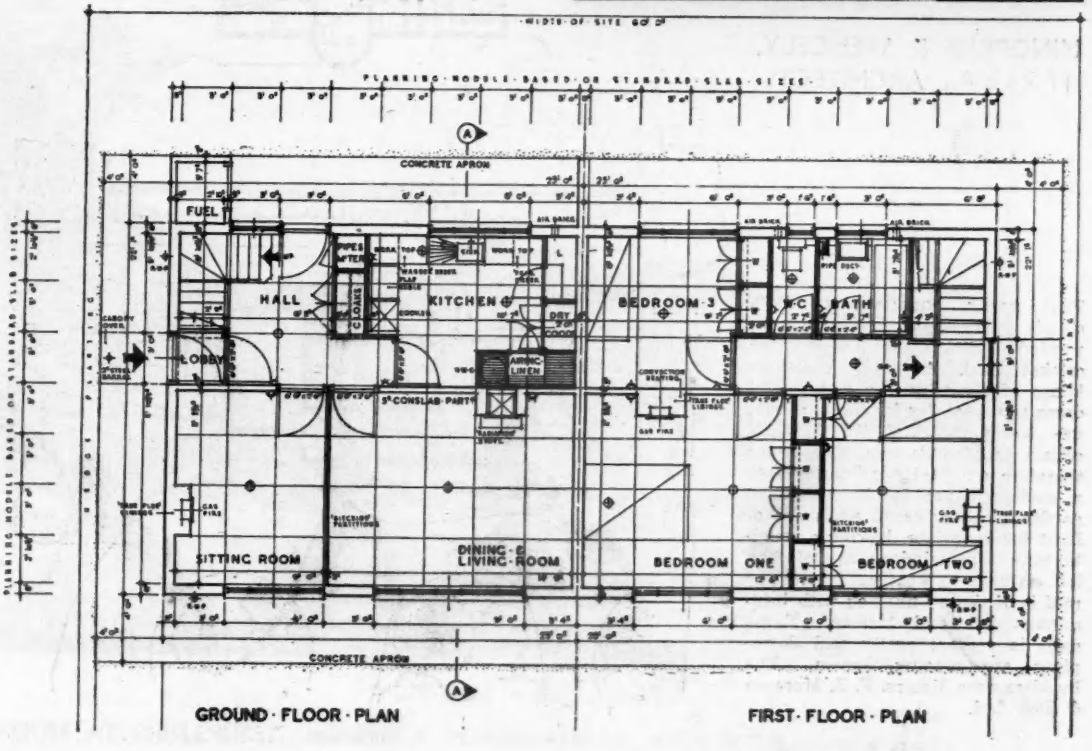
and 15 cu. yards ¾-in. gravel concrete. The total man-hours placing slabs, door and window frames, flue pipes, and filling with concrete for the whole of the walls, chimney breasts, chimney stacks, and weight-bearing partitions equalled 621 unskilled man-hours per house. No bricklayer was employed. The actual total cost of the "Conslab" construction carried out on these houses as previously detailed, and adding a suitable percentage for proportion of insurance, holidays with pay, supervision and profit, amounted to approximately £250 per house, and the comparative value in brickwork, according to the inventor, would be £280 at present-day prices.

Site works, general construction and joinery were carried out by Messrs. Leslie and Co., Ltd. Sub-contractors were: Roofing, John Williams and Co. (Rotherhithe), Ltd.; Asphalteen floor finish, General Asphalte Co., Ltd.; partitions, flush doors and wardrobes, Hitchins Flush Woodwork, Ltd.; plumbing and hot water (single-pipe system), Dent and Hellyer Sanitation, Ltd.; scaffolding, scaffold attachments and distance pieces, Mills Scaffold Co., Ltd.; electrical work, Arthur Cozens, M.E.C.A.; gas, Gas Light and Coke Co.; plastering, G. Fletcher and Co.; tiling, Carter and Co. (London), Ltd.; surrounds to living-room fire, Art Pavements and Decorations, Ltd.; and sanitary fittings, John Bolding and Sons, Ltd.



SECTION · A · A

Above: CROSS-SECTION. *Right*: ENLARGED VIEW OF PERMANENT CONCRETE SHUTTERING SHOWING ATTACHMENT TO SCAFFOLDING AND DISTANCE PIECES.



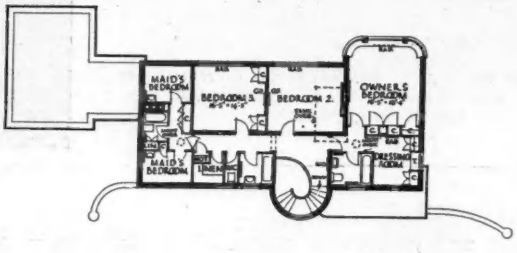
GROUND · FLOOR · PLAN FIRST · FLOOR · PLAN

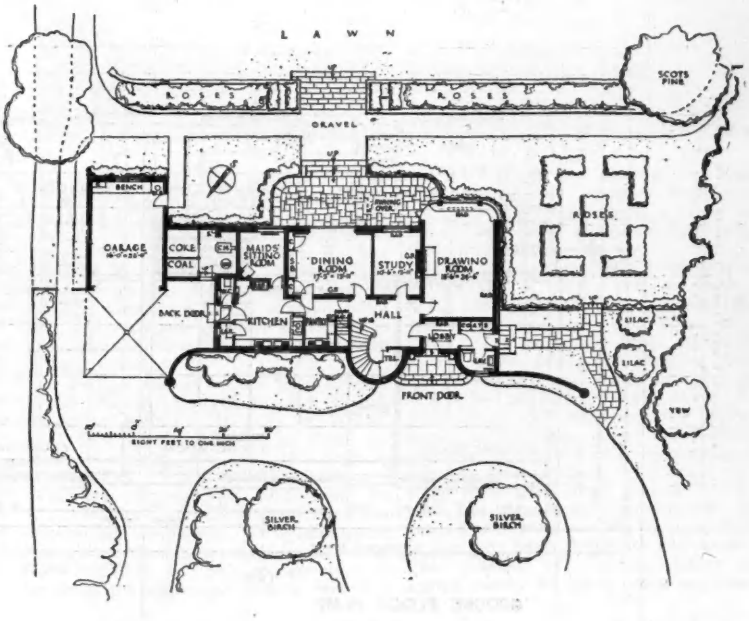
E

GARDEN FRONT.

A HOUSE AT CHISLEHURST

MINOPRIO & SPENCELY, FF.R.I.B.A., ARCHITECTS





THIS HOUSE, COMPLETED IN 1939, stands at the top of a sloping well-wooded garden adjoining the cricket field. An ugly Victorian house of three storeys was pulled down to make way for the new one, use being made of the former's cellars and foundations. The owner therefore enjoys the advantages of a modern house set in a mature garden. The external walls are of light brown bricks, having a rough texture. The windows are of teak left natural to weather grey. The roof is of timber finished with bituminous felt and tarmac. Eaves soffit is yellow; gutter and down-pipes are creamy brown. The builders were Messrs. F. S. Moreton & Son, Ltd.

CORRESPONDENCE

The Code of Measurement for Small Houses.

To the Editor of *The Builder*.

Sir,—A number of articles were published in *The Builder* soon after the issue of the "Code for the Measurement of Building Work in Small Dwelling-houses," reviewing the various changes and possibilities apparent from a preliminary study of the document.

By now, however, many surveyors will have had the experience of preparing bills of quantities based upon the Code, and will, no doubt, have encountered many difficulties.

First there is the stair problem. On particular houses I have been dealing with, the stair comprises a quarter space bottom landing with winder, and a straight flight of steps with solid balustrading of framing and hardboard. The Code says I must give this as one item, but I am afraid it would be impossible to price it if I did. The straight flight of steps is an article of manufactured joinery and would be given as one item, but the quarter-space landing and winder is peculiar to the house, and I fear that the solid balustrading and handrail are also. As the Code does not mention such possibilities, do I revert to the "Standard Method of Measurement of Building Works" and take these "specials" in detail, or do I improvise and give the landing as one item and perhaps the balustrading in detail? I decided on this latter course, but remain doubtful. Had I endeavoured to give the whole thing as one item I am afraid the description would have required more than a page of printed bill and would have given any estimator a severe headache.

In the Code it is suggested (page 14, paragraph 4) that timber in, say, ground-floor joists shall be taken as including "all labours, etc., *mortising, tenoning and wedging.*" Must it be assumed from this that work where "framed" need *not* be so described, as any "framing" is covered for in a basic price used for "*timber in floors*," that is, the basic price will include for "*mortising, tenoning and wedging*"?

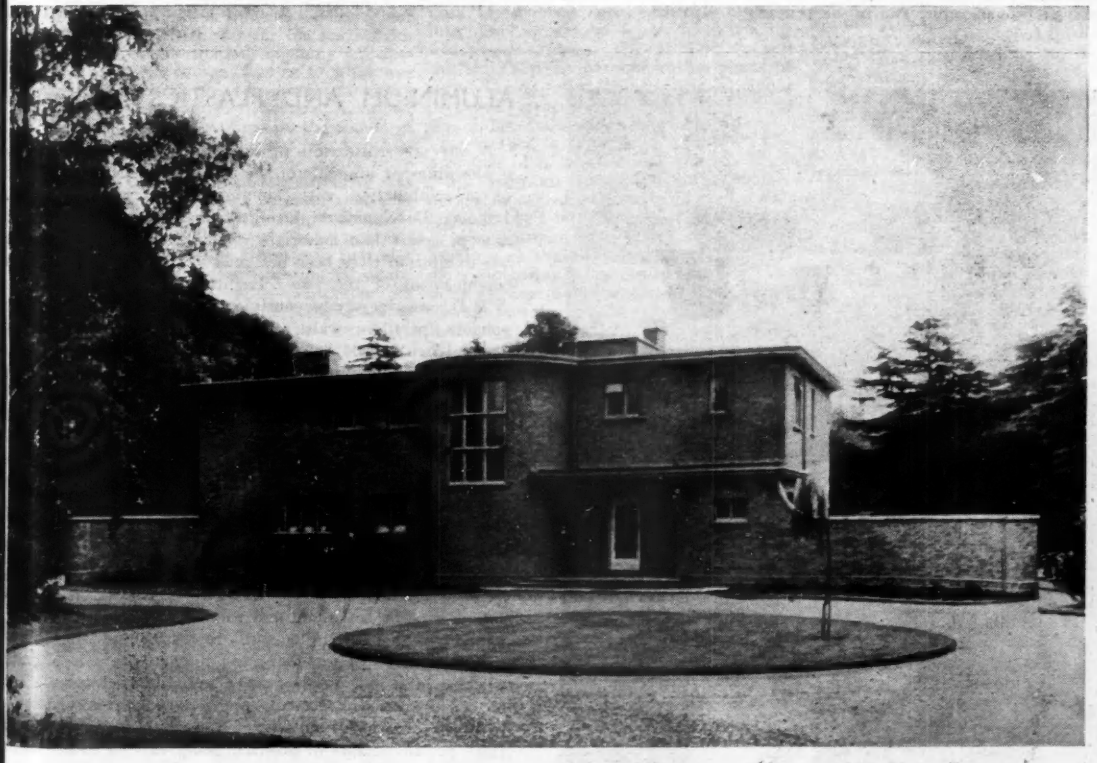
There is a further difficulty which occurs in the internal plumbers' trade (page 27, paragraph 9 (c), and page 28, paragraph 12). No mention is made of "unions," say, copper to lead. Are these to be given in the bill, or are they "included" in the pipe-runs along with connectors and the like?

It is observed that, whilst the alternative given in the S.M.M. of measuring brickwork in yards superficial is retained, the alternative of measuring timber in lineal feet (page 14, paragraph 3 (c)) is withdrawn. This appears to be a reversion to old practice, and it causes a problem for surveyors in the Midlands and North of England, where lineal measure is traditional.

For "substructures" we are referred to the Standard Method of Measurement. There are, however, a number of suggestions which might be adopted for reducing the number of items appearing in the substructure. For instance, planking and strutting, in normal house construction, is very rarely required, foundations being so shallow. Why not include this as part of the description of excavation in trenches? As regards trenches themselves, it might be useful to revert to the old practice of "excavate, part return, fill and ram, remainder cart away"—thereby eliminating two items.

As surveyors, we tremble sometimes at the thought of "adjustments" at final account stage with quantities based on the Code. How are we to deal with the many "omnibus" items, such as, say, copper cylinders—"*complete with their overflows (stating the length), ball valves, etc., and including connections to services, feed pipes, etc.*"—assuming there is a change in bore or type of pipe? I observed one local authority inviting tenders for houses and offering to supply bills of quantities based upon the Code "which," they stated, "*will not form part of the contract.*" This, of course, is one way out!

In general, a real difficulty is the necessity of falling back upon the Standard Method of Measurement where specific items are not covered by the Code. This makes a very erratic type of bill, for, where Code items are used, you have a condensed "omnibus" type of item, and then, when a S.M.M. item, or items, are required, you "break out into detail." We have been told that, broadly, the Code is a contraction of the S.M.M., but it is not clear upon what principles the contraction has been based. It would have been very helpful if those who compiled the Code had published "Committee Notes" showing the reasons behind the various important changes from the S.M.M. This would have enabled surveyors to capture the "*spirit*" of the Code and *improvise* where the Code itself is silent. The idea of improvisation in the spirit of the Code seems to recommend itself over the alternative of using the



THE ENTRANCE FRONT.

HOUSE AT CHISLEHURST. MINOPRIO & SPENCELY, FF.R.I.B.A., ARCHITECTS. (See facing page.)

"omnibus" type of item where permitted by the Code and reverting to a detailed analysis, on S.M.M. lines, where the Code is silent.

No doubt many of your readers, both estimators and quantity surveyors, will have encountered other problems than the foregoing. If these problems can be raised by all concerned the criticism will help to make the new Code a most useful document for the purpose for which it has been designed.

LLAMA.

Timber Housing.

TO THE EDITOR OF *The Builder*.

SIR,—I am glad Mr. Waldram has raised the point he does in your issue of December 28 in reference to the thermal efficiency of timber housing, and agree with most of what he says. One point, however, is not clear, and that is the reference to the packing of the timber frame work with either sawdust or slag-wool. Mr. Waldram seems to suggest that the construction he describes would be efficient without this. My own experience is that it *is* needed. Slag-wool would seem desirable from the point of view of fire resistance, though not from the point of view of cost.

I am living in a small timber bungalow of war-time construction, 3-in. by 2-in. oak framing, 4-in. by ¾-in. oak external weather-boarding on building paper; internal lining of plaster-board. In this cold spell the fuel bill is mounting in the endeavour to keep reasonably warm. It is rarely possible to reach 60 deg. F. The roof, owing to shortage of timber, had to be in old tiles bedded in mortar in place of cedar shingles, and the ceiling plaster-board is without any insulation above it. The floor is in concrete. If the insulation either of slag-wool or sawdust had been used over ceiling and in the framing, I am certain I should have had a warm dwelling. From what I can hear, other recently built wooden houses and bungalows leave much to be desired in the matter of internal warmth.

Personally, I think the better form of construction would be for rough diagonal boarding as the external side of framing with the weather-boarding (and possibly building paper) on this. But with the present shortage and high cost of timber this is likely to make timber dwellings relatively expensive.

CHARLES BARKER.

Stratford-on-Avon.

Brick Production.

TO THE EDITOR OF *The Builder*.

SIR,—The statistical information regarding brick production published in your issue of January 4 clearly indicates the necessity for immediate action on the part of the Ministry of Labour to provide additional skilled aid to reopen many of the 700 brickworks at present standing idle throughout the country, if building construction is to proceed unhindered on the lines prescribed by the Ministry of Health.

Although nearly 120 million bricks were manufactured during October, sales of bricks during this period exceeded production figures by no less than 50 millions! The number of houses constructed was below normal for this particular month, which can be appreciated when we recollect that before the war the average monthly brick production was approximately 650 millions.

The brain of a genius is not required to imagine the chaos which will be created if immediate steps are not taken to remedy this matter.

A. SEYMOUR.

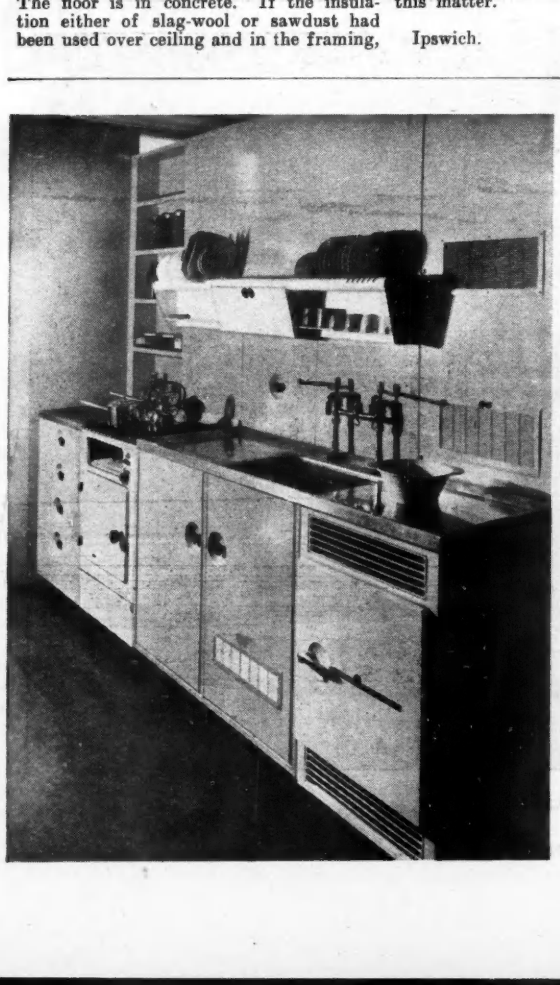
Ipswich.

THE PLANNING OF SCHOOLS

DISCUSSION AT THE ARCHITECTURAL ASSOCIATION

A MEETING to discuss schools do not promise much of interest to peop connected with the building industry the principal speakers are to be schoo masters, education officers and others wh approach the subject from the social an educational point of view; but in poin of fact a good many matters of buildin interest came up in the course of a re cent discussion at the Architectural Asso ciation. The meeting was held at 36, Bed ford-square, W.C.1, on January 8. Durin the earlier part of the proceedings, whil formal business was being transacted, th President of the Association, Mr. Graham Dawbarn, F.R.I.B.A., occupied the chair Afterwards this was taken by Mr. R. H Sheppard, F.R.I.B.A.

Following the showing of a film in tended to illustrate modern education methods, MR. G. I. SINCLAIR (Head master, Brockley County School for Boys said that in education during the las thirty years we had more and more starte with the child as the centre, and the development was most to be seen in th Central School. The little people used t sit in desks with arms folded for longis periods, but now it was realised that the should be physically active. This chang was proceeding upwards to the olde children, and as time went on we shoul need more room in the schools so tha boys and girls could be more activ physically. School architecture wa developing somewhat on those lines, an he had seen some designs where ther seemed to be great possibilities not onl for education as it was now, but as it wa likely to be in thirty years' time. In som



ALUMINIUM AND PLASTICS EXHIBITION

A PRIVATE EXHIBITION DESIGNED TO SHOW THE APPLICATIO to the different branches of the building industry, either alon or in combination with aluminium, was recently open i London. Developments during the war years have made man new processes and materials available, and the examples i the exhibition have been designed to show the most practica combinations of the two. For these Mrs. Gaby Schreibe N.R.D., was largely responsible; they included building com ponents, partition walls, bathroom fittings, cupboard unit and kitchen ware. Some of these were in "Alpha," a com bination of aluminium alloy with a coating of plastic sk giving durability and good surface finish. Another interestin development was a plastic paint. "Plastoglaze," which ha been successfully used during the war for ship painting, an is now available for walls and kitchens. This paint wi shortly be available with an addition of D.D.T., the ne vermin-destroying powder. A kitchen and bathroom un was on show (the kitchen side of which is illustrated). special feature of the kitchen is a heatable sink, heated wi gas burners. The sink is insulated to prevent the housewi burning her hands. A special extracter draws off the stea and odours of soapsuds, and there is a close-fitting lid. wringer is housed in a wall recess behind the left-han draining-board. Throughout the kitchen there is a uniform working level and ample drawer and cupboard space. Knob on all the kitchen fitments are recessed to avoid acciden to clothes and small children. These kitchen units well illu trate the advantages of plastics, being easy to clean, resistan to moisture and, it is claimed, not subject to chippin Messrs, Runcolite, Ltd., who showed the kitchen, have al produced plastic kitchen furniture, such as tables and trays.

plans there was room for flexibility, e.g., the gymnasium joined the playground, and the playground could be looked upon as part of the gymnasium and used as such.

ALD. W. E. MULLEN (Chairman, Holborn Education Committee), speaking as a builder, said great difficulty occurred when boys were taken as apprentices and guaranteed one day a week on full pay to attend a technical school. Four or five apprentices would each select a different technical school, and if one of them took the money and went to the pictures instead of to the school there was no redress. Another point was that boys who attended a technical school came back the next morning and said, "*This* is wrong; I was told *that*." There should be a closer liaison between the trade and the technical college.

Variety Needed in Schools.

MR. WOODHOUSE (County Education Officer for Kent) said there was to be a big school building programme starting in five years' time, or possibly ten. In the past we had strung little bits of curriculum on to an existing curriculum until the schools had become a series of compartments rather haphazardly strung together. For each individual school there ought to be the possibility of its architecture revealing what it was for. He did not think architects had produced as much variety as they might in our new schools: the schools were not sufficiently personal and domestic. One architectural difficulty was that very few curved lines were tolerated in building because they increased cost.

MR. HENRY BRADDOCK said he did not think many, if any, authorities in this country realised that the architect was the person whose whole training and life was devoted to accepting a problem and solving it in terms of enclosed space for a purpose. There was far too much holding back of information, not only information as to the present but as to what was running through the educational planner's mind for the future. The new Act must be raising great pictures in the minds of some educational authorities, and whatever those pictures were they had to come out into the open when the authority was instructing its architect in order that that architect should see the total problem.

MISS MARION BURGESS (Headmistress, Burlington School for Girls) said that size was important. Accommodation for about 500 children was best. Whatever its architecture, a school for 3,000 children could not be a human thing.

MR. DUNCAN SCOTT said that in one particular borough, out of 20 schools, 19 were below standard physically and from the point of view of size. If the problem of extending the site was considered, the Town Planning Committee had not the slightest idea as to when this could be done. Another problem was in connection with the existing Secondary Grammar Schools. It was impossible to form a development plan until it was known how many places would be available in these schools.

MR. J. H. NEWSOM (County Education Officer, Hertfordshire) said he had seen schools which an architect had designed, off which, for the sake of saving money, this or that had been knocked until the place had become an abortion. Many builders were on local government committees, and there was nothing a builder liked better than tearing an architect's plans to pieces. The Committee should say, "You can spend, say, £80,000, but the architect shall decide how that is to be done." This would provide a safeguard for democratic government, and at the same time get the technician into his proper place. Architects should not allow themselves to be "monkeyed about with" by ignorant laymen. Another point was that a school was a functional building, and the architect who erected it was usually uninstructed in its working. The erection of new schools would be one of the major jobs of county architects, and intending county architects should know how schools worked. No architect should design a school without sitting in a school for a week and watching what happened. There should be a close liaison between the administrating authority which said how a school should be built and the architect.

MR. C. H. ASLIN said it was a simple thing to say that the architect knew how to produce the thing he wished to produce, and that the general public should accept it. But this could not be expected, because for the last 150 years there had been no architectural appreciation among the general public. If to-day a school was built in the style of the 19th century, the general public would say it was all right. But he had learned from experience, as a local government architect, that if he produced a building which did not look like what the public were expecting but which was, in fact, right, in a few years the public would like it; an architectural tradition would be formed, and it would be accepted as good.

MR. F. R. YERBURY said he had recently been in contact with Danish, Dutch and Swedish architects. Some of the finest schools, at any rate, in appearance, were in Sweden and Holland. But in Sweden the schools were becoming inhuman because of their size. In Holland, before the war, they had begun to reduce schools to a smaller size, much smaller than the average here; and this brought into the schools a sense of humanity which was unique. Dudok had studied the child's point of view rather than his own. The object of the architect, he would say, was to produce a building of which the child would be so fond that it would look forward to going to it, and would like a picture of it in his home.

MR. HOWARD LOBB spoke of the concrete huts that are to be used as school buildings. It had been proved, he said, that it was possible to put up a permanent building at the same cost and, what was more important, in approximately the same number of man-hours as was required for the concrete hut. Could the architectural profession do anything to get the Ministry of Education to realise the folly of its decision that for the next five years we should have nothing but these wretched huts?

MR. F. ROWE said he had been struck by Mr. Newsom's suggestion of the architect spending some considerable time in a school in order to become familiar with the sequence of events when the children came in the morning, and so on. This was essential, especially for architects who were not local government officers. Such officers were probably in charge of school maintenance, and familiar with the day-to-day business of the schools. Besides procedure, there were small points such as those concerning door handles, sanitary fittings, taps, and so on, which appeared trivial but were important in the schools. There was plenty of scope for research work. He would like to see realised Mr. Newsom's idea of a co-ordinating body to spread information to school architects.

MR. LOWELL said the difficulty had been mentioned of architects getting their plans through because of builders and others on the Committee. The duties of the official architect would be considerably lightened if more architects served on local authorities. Very few did so. As to another point that had come up in the discussion, the Ministry of Works had a schools fittings section dealing with the standardisation of school fittings. This Committee had been sitting for some time, its publication was shortly to come out, and the Building Centre would have a permanent exhibition of school fittings, always changing and up to date.

Securing the Staff's Views.

MISS BURGESS, speaking of the architect spending time in schools, said the teachers might be asked what was their opinion of the plan.

DR. SINCLAIR suggested that the architect should have a word with the head of the school. He had himself on two occasions been concerned with schools that had been built by the municipality and altered. On those occasions he had known nothing of the intention of the architect until fairly complete plans had been ready. These had then been passed to him to consider, when all he could do was to look at circulation and so on. If those plans had been wrong, it would have meant starting all over again; before the architect put pencil on paper he should have an afternoon with the head of the school.

MR. WOODHEAD said this was a fairly common practice, but one of the difficulties with a brand new school was that you did not know who would be the head. It should be possible to get together a panel of heads and staff who could see something of the latest schools built. Mr. Newsom had spoken of light construction and his (Mr. Woodhead's) authority had received sanction for one or two such buildings. A few schools would be built more or less experimentally. These would set new standards, and other buildings would gradually be forsaken because they did not come up to standard. He hoped architects would have something to say about sites and furniture, particularly fixed furniture. There should be enough freedom to allow the teacher to choose from a number of standardised articles and to allow the architect to depart from standard if that was needed in any particular school.

MR. HANDISYDE said a close liaison had been proposed between architect and education committee. The Medical Officer of Health should also be brought in.

MR. HOWARD ROBERTSON said that what had emerged from the discussion was that the architect should be more familiar with the requirements of his job. He should spend time studying the various facets of the building he was undertaking. He (Mr. Robertson) thought the architects did this as well as they could. They went around and studied the jobs, but could not be in every place for a long time. Architects tried to make contact with people, and they found an extraordinary divergence of view over such details as the design of classrooms, floor coverings, door knobs, etc. There would always be divergence, but there should be some pool of knowledge based on experience, from which pool various solutions could be drawn. Considerations of cost lay behind a good many of our troubles. The architect was in difficulty in treating site and layout because he knew he would be screwed down to a limit in cost. Curves had been mentioned, and anybody who put a curve into a building for which the Government was paying would have it taken out. He had a strong sympathy with the speaker who had mentioned prefabricated huts. His own experience, serving with the Ministry of Works, was that a cheap hut never fulfilled its purpose. It could not be properly lighted or ventilated. Such huts would numb the minds of the children.

HUMAN NEEDS IN PLANNING

R.I.B.A. EXHIBITION AND CONFERENCE

An exhibition showing how social studies are contributing to post-war town planning and building is now on view at the R.I.B.A., 66, Portland-place, W.1, until Saturday, January 26. It is open to the public, admission free, from 10 a.m. to 5.30 p.m. daily.

In connection with the exhibition a two-day conference of technical experts—social scientists, architects and town planners—was held on January 11-12 to exchange information and ideas. Both the exhibition and the conference have been organised by the Architectural Science Board of the Royal Institute of British Architects with the assistance of the Association for Planning and Regional Reconstruction and the Institute of Sociology.

Session I.—Housing Requirements and Population Studies.

Mr. A. M. Williams (Deputy Town Clerk and Solicitor, Bilston), in opening the discussion, said that in order to restore the balance in the urban areas it was essential to plan for living conditions which would enable the personality to expand and to permit the individual to enjoy the full range of emotions and physical functions of which he was capable. The planning of an area must have as its basis the expansion of the individual personality of its inhabitants.

Mr. Mark Abrahams, Ph.D., stated that the absence of any official statistics relating to the number of various types of family in this country constituted one of the biggest and most serious gaps in the social data required by those attempting to plan solutions to our present housing difficulties. The nearest approach to the subject in official national statistics was to be found in the decennial census. The latest of these, however, was taken 15 years ago, and even those figures were of limited value since the tabulations related merely to household size and gave no information on family composition. Thus they told us that over one-fifth of our households contained two persons; but within this very considerable group there were households of widely differing composition and therefore of widely differing housing needs. There were households made up of a young married couple just starting family life; there were some made up of two old-age pensioners, some of a widow with a young child, some consisted of two young working girls temporarily rooming together, and so on.

Miss M. P. Newton, M.A., asked what was the population of London likely to be in ten, twenty, fifty years' time? How many families would it contain? What would be the composition of those families? Which of the existing dwellings should be removed on grounds of either unfitness or unsuitability of location? What standard of accommodation would the citizens demand? Those were some of the fundamental questions to which the architect of a town plan must have some sort of answer before he could begin his task of preparing the plan. Those and similar questions about present numbers of families and their composition were some of the problems which confronted those responsible for the building programme.

"It is clear," she added, "that a family defined as a unit which would wish to be housed in a single dwelling is not the same thing as a family defined by the Registrar-General for census purposes. We do not know how many of the lodgers, mothers-in-law, etc., would prefer separate accommodation if this were made available to them; we do not know for certain even that all the cases in which two normal families live in a dwelling and feed together are cases of forced 'doubling-up.' All that we can say for certain is that the numbers of units of people who would wish to be housed separately are greater than the numbers of census families, and that it is the census statistics of one- and two-person families that are most misleading."

In addition to the discomforts of a shortage of housing accommodation, however (whether it was a shortage of numbers of dwellings, or of numbers of rooms in the existing dwellings), there might be resultant effects on population structure itself. We could not rule out the possibility that the emphasis on the building of small houses by local authorities in the inter-war period might have contributed appreciably to the fall in the reproduction rates, and those responsible for the provision of houses for the people might do well to reflect on this and realise that housing policy might be an instrument of population policy, and that if it was used wrongly it might cut across the efforts of those who were seeking to provide conditions in which the reproduction rates would take an upward turn.

Mr. R. Nicholas, B.Sc., M.Inst.C.E. (City Surveyor, Manchester), said that a reducing number of births obviously resulted in a smaller average family unit, while the increasing standard of living gave young bachelors and spinsters and aged persons the opportunity for leading separate and more individual lives. It was to be expected that the single person would more increasingly prefer separate dwelling accommodation than living in lodgings, and that older people would largely wish to have their own specially designed accommodation in preference to a share in that of one or other of their children. "It can be expected," he added, "that many families, particularly where they have no young children, will prefer to accept flat accommodation in the area in which they have spent their lives, rather than tear themselves away to a new beginning some distance off. It can be expected that single persons will welcome a type of flat accommodation in which they can obtain some service, and that widowers and widows may desire to modify their dwelling requirements by living in cottage-flats—two-storey dwellings with separate accommodation on each floor—ideally suited to the smaller needs of those who have become used to a home of their own."

Session II.—The Grouping of Houses in Relation to Workplaces and Institutions.

In opening this session, Mr. M. P. Fogarty, M.A. (Nuffield College), said that some continuous nation-wide review of broad economic tendencies was essential for sound planning. The need for further detailed study of local economics was also nation-wide. It was no longer primarily a matter of areas in danger of acute depression; the most serious cases were already receiving a fair share of attention. It was in areas of badly balanced industry, including rural areas, where the danger was smaller, or in connection with the problem of shifting industry in, say, Greater London, that further action was most needed.

Who was to carry out these studies? First, and most emphatically, not the Universities. Nor, secondly, should the main, or at any rate the sole, responsibility rest on the Government. The Government could do and was doing valuable work at both the national and the regional level. But the Government's point of view was not, after all, the point of view of the industrialist or the local inhabitant.

"There are two main requirements," declared the speaker. "First, we need a regular series of independent reports on the technical, scientific and commercial prospects and possibilities of British Industries. Second, there should be a series of institutions specialising in the study of their own regions, and independent alike of the Government and the Universities, though working in close co-operation with both. The regional institutions would be mainly engaged in administrative research, but should have enough academic standing and detachment to be able to produce good fundamental work as well. They should primarily serve the needs of local authorities, business men, trade unions, development councils, and other interests in the region, though co-operating with both the regional and the national machinery of the central Government. They should also be financed and controlled mainly by the local interests, though without excluding the possibility of Government grants or of the representation on their governing bodies of Departments such as the Board of Trade, the Ministries of Labour, Agriculture, or Town and Country Planning, or the Scottish Office."

Mrs. R. Glass, M.A. (Association for Planning and Regional Reconstruction), said that whilst we found frequently that people of different ages, with different interests and from various distinct territorial groups, attend the same institutions, we hardly ever found a mixture of social classes. Poor people were far more tied to their own districts than well-to-do people. Lack of money and of time restricted their range of choice and of movement. Thus we found that poor neighbourhoods tended to be relatively more self-contained than those which were more prosperous. Whenever possible, poor people tended to use the institutions which were nearest to their homes.

Miss Kate Leipmann, Ph.D. (Bristol University), said all data being assembled, it became possible not only to say how far a satisfactory balance of industry was achieved in the area as a whole but also to determine the "employment orbit" of each town, parish or group of parishes. Were the inhabitants within reasonable reach of a fair range of industries and occupations, or for what deficiencies had remedies to be provided? Additional openings had not necessarily to be found within the local authority area boundaries—what mattered was accessibility from the homes of those who had too small a choice of jobs.

The speaker added: "Mobility of labour is a live issue in any employment policy; its implications cannot be judged without knowledge of volume, origin, composition (if possible also time) of the influx of workers. Further questions to be answered are how long it takes for immigrant individuals and families to feel at home in the new surroundings, and what number, in proportion to the local

population, can be absorbed into local life within not too long a time."

SESSION III.—THE SOCIAL FUNCTION OF TOWNS AND THEIR PLACE IN THE REGION.

MR. K. M. BUCHANAN, B.A. (Chief Research Assistant, West Midland Group on Post-war Reconstruction and Planning), in opening the discussion on this subject, said that while it was envisaged that for certain services (*e.g.*, hospital facilities and certain recreational facilities) the rural areas would continue to depend upon the market towns, it would seem desirable that many types of service at present either not provided, or that inadequately so, might well be offered in the rural areas, probably in the larger villages or hamlets rather than in the market towns. Educational facilities, including libraries, welfare clinics, etc., might well be located in these village centres. The services they would offer would be essentially supplementary to those offered by the market towns, and their development would call for much greater development of inter-village transport to offset the existing excessive concentration on the market towns.

MR. A. E. SMAILES, M.A. (University College, London), thought that the towns did not belong to the countryside as they once did. In the pre-industrial age urbanism was a plant firmly rooted in the agricultural life of the countryside. The town was not only in the country, but of it. Modern developments, however, had seen the multiplication on a great scale of other categories of towns, above all of industrial towns, which were often divorced in many respects from the rural life of the surrounding region. Divorced though they might be in outlook, however, they were none the less significant for that rural life, and they were rural service centres.

SESSION IV. SOCIAL RELATIONSHIPS AND TERRITORIAL GROUPING IN TOWNS AND COUNTRYSIDE

Opening the discussion, MISS R. W. JAMES, M.A. (Secretary, Agricultural Economic Research Institute, University of Oxford), said that investigation showed that there had been a steady decline in the population of most rural areas over the last 50 years. The result had been to produce communities so small as to make efficient social and economic organisation well-nigh impossible. In her survey area there were three villages with populations of just over 1,000 people, but the remaining 12 had an average of under 250, and the smallest had only 168. Many of the drawbacks of the small village were illustrated in the area—the difficulty of providing water supplies, sewerage and electric light, owing to their high cost; the difficulty of maintaining the social services; the necessity of sending children away from the village for their schooling; the disadvantage of sharing a district nurse; the lack of shopping facilities; the impossibility of supporting the usual recreational organisations.

"Farming," she added, "appears to have done far less than any other national industry to adapt itself to the conditions of modern industrial life. In size, layout and equipment, there appears to have been no attempt at reorganisation adequate to take advantage of the revolutionary changes which have occurred in farming systems, in technical inventions, in the use and reward of labour. Farms in the survey area are mainly small, half of them being under 150 acres, and offering no scope for scientific management or for the advancement of labour. The layout of farms is inconvenient, entailing difficulty and wastage in working; many fields are too small for modern machinery, buildings are obsolete, dilapidated and inadequate; water supplies frequently lacking. The position of the farm worker compares unfavourably with the skilled worker in any other industry. The evidence of the survey suggests that the problem of bringing new life to the countryside is not simple, but complex; not an isolated problem, but an integral part of national reconstruction; not capable of solution by a revival of agriculture, but needing at the same time the restoration of a better balance in the rural population.

"It may be that the solution will be found as part of a larger conception of planning. The Royal Commission on the Distribution of the Industrial Population was emphatic on the need for decentralisation of industry—and if industry can be sited so as to increase the size of existing village communities, rather than to create new centres of population artificially, much benefit might accrue to both town and country."

MR. F. G. THOMAS, M.A., said that public transport served its own ends first and the village afterwards. Hence, though there were good services on certain radial roads from the towns, large tracts of the countryside had but an inadequate service. The exception was, of course, the postal service, from which very many important deductions might be reasonably made.

"If the countryside is to be revivified," he declared, "and become economically well based, each such area must be developed to the limit of its agricultural and industrial resources. Its population will then be increased and the physical amenities provided for its people. The fallacy that it is cheaper to live in the country must be countered. It is not; it is more expensive both for the individual and the statutory authority, if reasonable standards of life are to be maintained. It is more difficult to starve in the country, which is different and irrelevant.

"The community centre has not solved nor stopped the decline of a single village, because it cannot touch the economic causes of the decline; nor was it ever intended to do so by anyone knowing rural areas. Much has been done, of course, to build such centres, from those attached to schools in Cambridge to simple huts erected as War Memorials. Too often they only reflect the bankruptcy of the countryside they were built to serve. The design is unattractive, often ill-designed and lacking in anything but the barest essentials. One has only to contrast them with the church—the community centre of its days—to note the difference. The church was built to enhance the beliefs of a vigorous increasing population, whose village life was lively if sometimes crude and coarse. The community centre is a pathetic attempt to house and encourage the enfeebled community life of the village whose few inhabitants know each other only too well, and whose lively members have already gone away. The community centre is essential, but it is not a solution to any village problem. It cannot create relationships; it can only house them.

"New relationships will only be extended as new people are brought into the village to work in agriculture and industry. This is possible. It is therefore necessary to consider what new relationships may follow any such development. If the area and not the village is the unit, then the population will be dispersed and not concentrated; if the neighbourhood is to be a social unit, then there must be mobility for all within the neighbourhood; if the rural tradition is to be maintained, then the countryside must predominate over the new buildings and centres of population and—equally important—the proportion of the population in any area working on the land or in associated industry must be greater than that of workers in industries located in but not derived from the products of agriculture.

"Our countryside has been enlivened during the war with men from overseas, our own Forces, Land Army Girls, evacuees, War Agricultural Committees, new machines on the farm, and the excitement of being recognised, at last, as an important front line effort. But now the troops are leaving, many of the Land Army Girls are getting restless, evacuees are growing up and looking for jobs with prospects, the village lads serving abroad, it is said, are not coming back. The excitement of the war is over. The scepticism of the countryman is being awakened again. The stark fact remains that in spite of the war and high prices and wages, the countryside is still not a desirable mode of life to most people when compared with what is possible elsewhere. Only by rebuilding on the twin foundations of a sound agricultural and industrial policy suited to rural areas can a modern rural society be created."

R.I.B.A.

Probationership.

AFTER March 31 next, all candidates for the Probationership of the R.I.B.A. will be required to submit certificates of having passed recognised examinations, and it will no longer be possible to submit special applications, as has been the case for those who started their full-time architectural education or joined the armed Forces before June 30, 1943. Special applications may, however, be submitted, after March 31, by applicants serving with H.M. Forces overseas who produce evidence that they have been prevented from making their special applications by March 31 by reason of their overseas service.

Distinction in Town Planning.

The R.I.B.A. Distinction in Town Planning is obtainable by Fellows, Associates (who are not less than 26 years of age) and Licentiates. The test by means of which this Distinction is awarded is conducted by special Examiners appointed by the Council of the R.I.B.A. This award does not take the place of the R.I.B.A. Diploma in Town Planning, which is obtainable by Fellows, Associates and Licentiates of the R.I.B.A. without any minimum age limit; its primary purpose is to satisfy a demand from senior architects to take a qualifying test in town planning suited to their age and existing attainments. The Examiners will meet three times a year—in February, May and October. Applications should be submitted to the Secretary of the R.I.B.A. by the first day of January, April or September annually. Copies of the form of application containing the procedure, regulations, general scope of study and bibliography may be obtained, free, on application to the Secretary, R.I.B.A.

Compulsory Purchase in England and Wales.

The Minister of Town and Country Planning, in exercise of the powers conferred upon him by subsection (1) of Section 1 of the Town and Country Planning Act, 1944, has ordered that January 1, 1946, be the date on which it has become practicable for a local planning authority to make an application to him for a Declaratory Order for the purposes of the said Section 1.

CO-ORDINATED BUILDING DIMENSIONS

AN AMERICAN STANDARD,

THE American Standards Association has approved an American standard on the basis of which building materials and equipment of co-ordinated sizes and dimensions will be made available to construction operations, and building plans and details can be correlated with such dimensions. This represents a fundamental development in building design and construction, opening the way, it is hoped, to improvements in quality and to reduction of cost. Briefly, it will eliminate much cutting and fitting on the job, reduce perceptibly the number of sizes of building products to be manufactured and carried in inventory, and simplify design and detailing of buildings.

The new American Standard is the following: A62.1—1945, "American Standard Basis for the Co-ordination of Dimensions of Building Materials and Equipment"—the Basic Standard.

Also approved as an American standard is: A62.2—1945, "American Standard Basis for the Co-ordination of Masonry"—supplementary to Standard A62.1—1945.

Project A62 was organised by the American Standards Association in 1939 with the American Institute of Architects and the Producers' Council, Inc., as joint sponsors. It has been referred to in editorials in *The Builder* on February 13, 1942, and June 16, 1944. The technical committee consists of 57 members, 24 representing producers' groups, 26 representing general industry interests such as architects, engineers and contractors, while seven represent the consumer or the public, including Governmental agencies.

The project is a co-operative effort of the building industry authorised under the following scope:

(a) The development of a basis for the co-ordination of dimensions of building materials and equipment, and the correlation of building plans and details with such dimensions;

(b) Recommendation of sizes and dimensions as standards suitable for dimensional correlation.

Basis Adopted for Co-ordination.—With respect to the preceding paragraph (a), the new American Standard A62.1—1945 provides the basis for co-ordination through a module of four inches applied as an increment to the sizes and assembly of building parts and to the layout of buildings. Four inches was selected as the unit affording the maximum practical standardisation and simplification, and most consistent with present standardisation and building practice.

Now that the Basic Standard has been formally adopted, the way is cleared for the manufacturers in different lines of building products under preceding paragraph (b) to recommend sizes and dimensions of their particular products as standards suitable for dimensional correlation. When approved by the Sectional Committee, these tentative standards similarly will be submitted to the American Standards Association for approval as American Standards and as supplementary to the Standard A62.1—1945.

Anticipating the approval of the Basic Standard, several groups of manufacturers of building products which comprise the outer shell of buildings have developed sizes and dimensions of their products believed to provide dimensional co-ordination and now available for incorporation by designers and specifiers in building plans. Such sizes are the product of Study Committees organised by Committee A62 and activated by the manufacturers' trade associations in these particular lines of products.

For example, *Study Committee 1—Masonry made of Structural Clay Products*—has proposed three standard sizes of common and face bricks and three sizes of facing tile together with co-ordinated sizes of back-up units. Some time ago the majority of the producers of such products agreed to retool their production for the new sizes after the war. Many manufacturers have placed orders for new equipment, and when available the new sizes will be produced.

Study Committee 2—Wood Doors and Windows—has developed one national standard for 1⅛ in. and 1⅜ in. stock windows and sash replacing several regional standards. Its trade association is now undertaking to have these new sizes adopted by all producers.

Study Committee 3—Masonry made of Concrete—has developed three standard sizes for concrete brick and other standard sizes for concrete masonry units, with suitable supplementary units. Many manufacturers are already producing these sizes.

Study Committee 4—Metal Windows—has developed new sizes for solid-section steel windows, except light-weight residential casements, and for steel double-hung windows. About 300 sizes now replace the several thousand previously catalogued by manufacturers. Agreed-upon industry sizes are being produced.

Other Study Committees are at work dealing with natural stones, cast stone, structural wood, structural steel, miscellaneous metal products, open-steel flooring, masonry partitions, cast-in-place concrete, window accessories, glass block, metal doors, kitchen equipment, etc.

Proposed American Standard A62.3, including the standard co-ordinated sizes of brick, tile, facing tile, and complete masonry units, is in the course of review. Other American standards, supplementary to the Basic Standard, are being prepared to cover the sizes of metal windows and wood windows and sash. While the sizes of these various products developed by the Study Committees have not yet been formalised by adoption as American standards, this does not need to hold back design of buildings embodying their use. The designer and specifier is urged to incorporate the products of tentative co-ordinated dimensions which are available into current projects and thereby obtain the advantages of the new sizes.

The chairman of the Publicity Committee for Project A62 is Mr. J. W. Follin, Manager Director, the Producers' Council, Inc., 815, 15th Street, N.W., Washington 5, D.C.

HEATING AND VENTILATION OF DWELLINGS

POST-WAR BUILDING STUDY NO. 19

IN view of the need for the most careful husbanding of our fuel resources, special importance attaches to the report of the Post-War Building Study Committee on Heating and Ventilation, which deals with the problem of heating and ventilating post-war houses and flats. The Committee was set up by the Building Research Board in July, 1942, with Sir Alfred Egerton as Chairman and Sir Ernest Simon as Vice-Chairman. Despite the complexities of a very difficult subject, the Committee has been able to reach a large measure of agreement on many issues. Their Report, which runs to 228 pages of close print, contains authoritative guidance and is presented with no more than a general reservation.

The Committee has first set out the average conditions of warmth and ventilation which are desirable, and the minimum provisions for hot water supply and cooking, and then proceeded to find the amount of heat theoretically needed in an average house, and how this amount is affected by the construction of the dwelling, the layout of the hot water system and so on; and thirdly, to discuss the various factors relating to the choice of methods of providing these essential services. The Report thus provides for the first time a yardstick by which the heating services of a dwelling can be judged; and contains the necessary information for the planning of these services before the house is built. Two of the more important recommendations concerning the desirable conditions are that means should be provided for maintaining a measure of warmth throughout a dwelling, even at night, and for giving an adequate supply of hot water.

The Committee points out that, before the war, the average fuel consumption per house in this country was considerably more than in Germany, and very little less than in America. Against this, most people would agree that our homes were not on an average appreciably warmer than German homes, and they were certainly very much less warm than the American. This is put down primarily to the inefficiency of the appliances in common use in this country, but the Committee points out also that houses abroad are often better insulated. Our technical backwardness, says the Committee, may have been due in part to the abundance in Britain of cheap coal, with the result that there has been little incentive to the economical use of coal; but the Committee is hopeful about modern industrial developments and looks forward to a period of rising standards of domestic warmth and comfort, combined with a reduced consumption of fuel.

Both the insulation of buildings and the development of heating appliances have been dealt with in other Reports in the same series (the first subject in "House Construction" and the second in "Gas Installations," "Solid Fuel Installations" and "Electrical Installations"), but this new Report gives a broader view, and at the same time adds some revealing details. For example, among the more interesting passages are those in which estimates are made of the reduction in heat losses which results from thermal insulation of the dwelling and of the hot-water system. In common with other recent reports, a much improved standard of thermal insulation is recommended, not only because of the economy in fuel but also on account of the greater comfort. The Report also shows how the annual all-in cost of the heating services may be estimated, including not only the cost of the fuel consumed, but also the maintenance cost of the appliance, and the cost of replacing it when it has become obsolete.

In discussing the factors relating to the choice of methods of heating, the Committee has not forgotten the questions of convenience and amenity. The problem of atmospheric pollution by the smoke from domestic appliances (the source of about half the smoke in the air) is considered in some detail, and some striking figures are given. An Appendix is devoted to recording the results of an extensive social survey of the heating of dwellings at the present time. The Report is obtainable from H.M. Stationery Office, price 2s. 10d. post free.

THE MODERN APPLICATIONS OF WELDING

By C. W. BRETT, M.Inst.W.

In 1939 it seemed likely that much time would elapse before the advantages of welding, in certain classes of steel constructional work relating to buildings, became the rule rather than the exception. The situation, however, has undergone great changes. Practically every phase of welding activity has advanced by leaps and bounds. Were it not for these methods being applied to shipbuilding on a stupendous scale during the past few years the position to-day might have been quite different.

The point of chief interest to readers of *The Builder* is the present opportunities. So far as application to new contracts are concerned there are certain aspects which prevent free development, but this is likely to improve steadily.

The Field of Repair Work.

One of the most important of the immediate openings is in the extensive field of repair work. The difficulty of replacing metal equipment in damaged houses is a point that needs no emphasis, and yet in a large majority of cases parts that are broken or corroded are well worth while the inconsiderable cost of restoration. It is work that can be completed quickly, and the entire responsibility can be shouldered by the firm of scientific welding engineers undertaking the job.

Both the apparatus used and the technique followed by the operators have undergone important changes. The result is that jobs are being tackled to-day in the certainty of complete success, whereas, not very long ago limitations would have handicapped or even prevented entirely the work.

In this connection one has only to consider how the complexities of welding copper have been overcome, a point of no small importance in modern plumbing, or how is it feasible to weld together the most divergent metals, such as, for example, aluminium and steel. Sometimes there are sound practical reasons for seemingly odd combinations, or perhaps the object is merely decorative requirements. This result is sometimes more easily achieved by spraying, done by passing a wire or powder of the selected material through an oxy-acetylene flame. The molten particles will coat any matt surface toward which they are directed by a stream of compressed air.

Repair of Building Equipment.

Building equipment is by no means so readily available as is desirable. Unfortunately the call is almost invariably for new appliances, whereas there is a great deal of existing machinery standing idle, such as concrete mixers and contractors' plant of all kinds. Only a few days ago the writer saw a motor-mixer which was still standing on the site of a house-building project that came to a sudden stop with the outbreak of war. The machine was probably new six years ago, whereas, purely through neglect, it is likely to be scrapped. Closer examination showed that, notwithstanding the extremely decrepit condition, with red rust on gears and engine, it seems well worth while to weld the probably frost-cracked cylinder jacket and by similar means replace gear-teeth that are broken away and lost.

It is surprising what excellent results are obtained by skilful operators working upon machines which appear to the inexperienced to be damaged hopelessly. Naturally this class of repair is highly specialised and for this reason is mainly entrusted to firms catering for these needs which have adequate resources to deal with them.

A particularly useful branch of reconditioning is that which concerns boilers. All types can be handled, varying from those required merely for hot-water supplies to others of high-pressure type. Owing to a paucity of replacements, work of this kind has increased of late. Much of this is due to the satisfaction experienced with repairs which have been embarked upon somewhat tentatively in the first place by those who have had little acquaintance with what welding skill can accomplish. If there are weak spots, new metal can be applied until the original thickness is restored. When the faulty area is relatively large, then it is more usual to weld a new section in position. This may be cast where iron is concerned, or, in other instances, steel plate may be used.

The Inaccessible Plan.

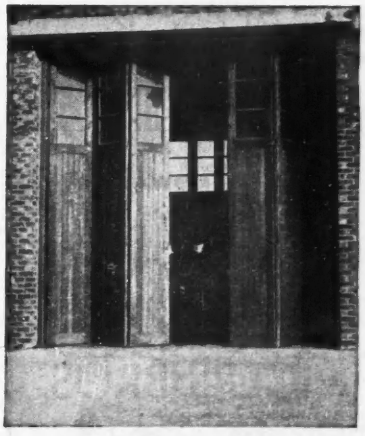
It is not uncommon for a layman to suppose that welding is not feasible because a fault may seem quite inaccessible. In the worst cases of this kind it is not unusual for a section of metal to be cut out to enable the seat of the trouble to be reached conveniently, after which the material temporarily removed is soon replaced without loss of strength or visible trace of the trepanning operation that has been done.

Damaged pipework is handled on similar lines with surprising speed; in fact, experience indicates that welded pipe joints are the most desirable, particularly when they are to be encased or otherwise made virtually inaccessible. Should it be necessary to remove a section of welded pipework at any time, it can be done more quickly than a jointed section of the usual pattern can be disconnected, whilst it takes very little longer to make the new welded length integral with the pipework that remains.

Apart from the resources of welding applied to maintenance needs, similar methods can be used to produce special fittings with surprising economy, particularly if only one or two of a special type are required. For large quantities over which the preliminary cost of providing patterns can be distributed, castings are cheaper, but the weight must be increased to obtain the strength of welded steel.

There could be no more opportune time in which to draw attention to welding service. It is solving difficult mechanical problems springing from emergencies in a way that is fully in keeping with the great record of British engineering.

KING SLIDING DOOR GEAR



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A FRENCH EXPERIMENTAL TOWN

By B. S. TOWNROE (Director of the Franco-British Society).

French town-planners and architects are preparing plans for interesting experiments in new towns. The housing shortage in France is far more serious than in this country. About 20 per cent. of the dwellings of the French have been destroyed or badly damaged in the course of the two great wars. Between the wars, during which we in this country built over 4,000,000 houses, the French only built half a million houses from 1919 to 1939.

The reason why France is so much behind this country in housing is that a Frenchman is usually only prepared to spend on rent less than a twentieth of his weekly wages, whereas the proportion in England is often about a sixth. It is officially stated by the French Ministry of Information that the French are particularly badly housed in the north and east of France, and in Normandy.

The town of Roubaix is particularly bad, for it contains at least 15,000 slum dwellings and hundreds of insanitary courts. During 1945 a committee was set up, supported by local textile manufacturers and representatives of trades unions, to buy land on which to build a new town. This is situated at Douvaux, between Roubaix and Tourcoing. On this land it is proposed to erect houses so laid out that the residents may enjoy every scrap of available sunlight. In the words of the committee, "the sun is discreet" in the North of France. Accordingly, for detached, semi-detached, and houses in terraces, the layout provides for the living-room, "salon," bedrooms and kitchen to face the south. The entrance, window on the staircase, the w.c. and laundry face the north. Each house has its garden on the south. The town cannot be called a garden city, for it is surrounded with factories, but it is intended that it shall have a semi-rural character. There will be buildings for recreation, including committee rooms and libraries. Religious and social services are also provided with accommodation.

Great interest is being taken by the French Government in this experiment. British architects have, of course, for years past fully appreciated the necessity of a layout providing the maximum amount of sunlight and air. The French are now profiting by our example. The houses are to be built in the traditional methods of the North of France, but the town will also contain a certain number of prefabricated houses built in concrete or with metal walls. It is claimed that this experimental town will be a prototype of the French towns of to-morrow.

THE COMMERCIAL NEEDS OF TOWNS

MR. O. W. ROSKILL'S PAPER TO PLANNING SUMMER SCHOOL.

"THE Commercial Needs of a Town in Relation to its Function and Size" formed the subject of an address by MR. O. W. ROSKILL to the Town and Country Planning Summer School, Bristol, last autumn.

The background of town planners (he said) is primarily æsthetic and social. They react, for example, against the eyesore of ribbon development and against the galvanised bungalows which have broken out like a pox on open spaces around past centres of employment. Business men as a whole are lacking in æsthetic background. It is still largely true that to be a captain of industry the best early training seems to be to start by selling newspapers, and a successful shopkeeper must sweep out the shop and run errands at 14. I think it is becoming less true—and the trend is of importance to town planners. Technicians and men of specialised knowledge generally are becoming relatively more important in industry and trade, and though hitherto they have not been characterised by their appreciation of the arts (perhaps because they specialised too early), they are more likely to acquire it than the men who left school at 14 and sacrificed a broader education to the advantages of growing up in business. Appreciation of the arts gives an important stimulus to and provides a cultural background for creative art. There is an essential relationship between business men and the æsthetic world, the nature and scope of which deserves more recognition from both sides.

Town Planners and Background.

I spoke of the æsthetic and social background of town planners. The widespread attention devoted to social problems in the last decade is one of the major changes in thought. Britain has always been ahead of other countries in what might broadly be called human feelings, and this is probably one of the chief reasons for her political stability. Unfortunately, those who seek to find an outlet and expression for their human feelings are often (though not always) divorced from intimate knowledge of the economic life of the nation. Consequently town planning has been over-concerned with the home life of John Citizen and insufficiently concerned with his working life.

I am speaking primarily about shops, but production and distribution are complementary processes in the economic life of the country, and I first want to make two general points. The first is that even with the immensely increased mobility of industry which has been characteristic of the growth of electrification, there is still a wide range of industries the location of which is determined by natural resources, such as coal (*e.g.*, coke and to a large extent iron and steel) and water (*e.g.*, rayon). The former employs predominantly male and the latter female labour. It is essential that balanced industrial development should take place, partly to avoid putting too many eggs in one basket, so that if a single industry declines the whole community is left stranded; partly because a high family income is just as important as a high wage for the chief wage-earner, and this demands opportunities for diversified employment, which have not hitherto been evolved in some South Wales mining valleys and some Lancashire cotton towns.

The second point is that far too little attention has been paid hitherto to the importance of linkages in determining the location of industry. The motor-car industry in the Coventry-Birmingham area is an obvious example, and accounts for the presence in that area of factories making a wide range of accessories and parts. It would be fallacious to suppose that a light industry such as, for instance, the manufacture of electrical accessories for motor-cars could be scattered widely throughout the country without adverse economic results to the motor industry. There is a further factor of a different kind accounting for a type of homogeneous industrial concentration, as is found in the leather industry at Walsall or the potteries at Stoke—namely, that even if there were originally other (raw material) considerations influencing the siting of the industries there, the reason for their remaining together is that there are definite advantages in having a major centre for the production of one class of goods, just as there are advantages in having the City of London subdivided into small areas where the shipping, metal, rubber, Mincing-lane, fur and other traders are concentrated. I do not want to overstress this point, because there is a delicate balance between intellectual inbreeding and conviction that only the persons born in the "five towns" can know anything about pottery, and intellectual isolation, in which a lone leather goods manufacturer, say, in South Wales is at a disadvantage with his competitors in Walsall. Considerations of industrial location must therefore precede town planning, whereas the reverse is unfortunately often the case. The difficulty of gearing the two together on the time scale is one of the greatest obstacles to obtaining alignment between town planners and industrialists.

The Place of the Individual Shop.

Shops, broadly speaking, represent Man the consumer, while factories represent Man the producer.

It is well known that the technique of distribution has, on the whole, lagged behind the technique of production. Large scale distribution is still much rarer than large scale production, and a higher proportion than necessary of the price paid by the consumer is represented by distribution costs. This is a thorny political problem, because it may be held that the very independence of an independent shopkeeper is a social asset which should on no account be destroyed. For this reason it is essential in the first place to get a true picture, even if only in the roughest outline, of the present organisation of retailing.

In a number of sample towns it was found that subsidiary street shops, practically all of which are small independent shops, account for over 95 per cent. of the total number of shops. It was estimated, however, that they only represented about 42 per cent. of the total turnover. There is an immense difference in the average turnover between the small independent in subsidiary streets and the large independent in the main streets. In the subsidiary streets the average turnover of food shops, which account for a high proportion of the total, is probably under £1,000 per annum. In main streets, the average turnover of all independents is probably between five and ten times this figure, and there are many which have a far higher turnover. Multiple shops, including variety chains, are mainly to be found in good sites in the main streets, and the same generally applies to department stores.

It is practically impossible to give a definition of the department store or to draw any lines between a large drapery and a departmental store, but in general there are probably few towns with population under a quarter of a million which can support a department store. The growth of the "Co-ops" has, of course, been one of the major features of retailing over the last two or three decades. They probably account for about 14 per cent. of the total trade of the country, compared with 17 per cent. for multiples and 61 per cent. for independents.

Physical Requirements of Shops.

The physical requirements of different types of shop vary enormously according to the goods sold and the method of operation. This feature has been insufficiently studied by town planners (1), and there is too often a tendency to provide for a row of shops, often of approximately similar frontage and depth, in a uniform facade where technical facilities have been given little or no consideration, as compared with the æsthetic appearance of the facade and perhaps the convenience of the flats above. Stockroom requirements, to take a simple example, vary greatly, and moreover retailing technique is constantly changing. Any restriction on such change imposed by town planning is undesirable. A further example is the growth in provision of staff facilities such as canteens, rest rooms, etc., by the larger shops, particularly variety chains, which obviously require increased space. Delivery conditions and frequency of delivery to the shop vary widely.

One of the reasons for the divergence of view between business men and town planners, to which reference had already been made, is that a business, to be successful, must be highly flexible. There is a tendency for planners to like to put "planned" to a scheme just as business men like to put "paid" to a document, and to imagine that the work is over.

(1) "Business Buildings," Post-war Building Studies No. 16, by a committee convened by the R.I.B.A. (H.M.S.O., 1944), pp. 21-34, provides a good example of this. The section headed "Shops and Stores" deals almost exclusively with department stores, which account for only about 8 per cent. of the total retail trade of the country.

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Town planning must move at least as fast as industrial and commercial conditions change, and, indeed, must try so far as possible to anticipate them. It is quite impossible to prescribe a shopping centre of a certain size and expect it to remain constant for decades ahead. The type of shop required may well change significantly, and the shopping centre may expand or contract. It is advisable, therefore, for shopping centres to be adjacent to residential centres, which are the most likely to provide flexibility as regards expansion or contraction. Even then trouble may arise from the fact that it is comparatively easy to transform a residential area into an extended shopping area because there is an immediate rise in values which makes the transformation financially attractive. Change in the reverse direction is less easy, though luckily somewhat less commonly required hitherto. A good example of the type of fundamental change in retailing methods which can take place very rapidly is the growth of super-markets in the U.S.A. These form a completely new type of retail outlet, often established outside towns, for instance at big road junctions. A very wide range of goods is stocked, even wider than many variety chains, and in some cases provision is made for driving by car right into the market. The customer selects and removes his own goods as in a variety chain store.

The Planning of Shopping Centres.

The general view of shopkeepers is that shopping centres should, as far as possible, be kept distinct from, though obviously in close proximity to, amusement centres, civic centres, commercial centres (banks, insurance offices, etc.), rather than mixing up banks, cinemas and shops in the same street and therefore interfering considerably with the shopping frontages. In this direction, therefore, shopkeepers tend to support town planners who wish to change the existing utilisation of main street frontages and form homogeneous shopping centres. Flexibility as regards size of premises can probably best be maintained by altering the depth and making arrangements so that adjacent shops can take over the back areas of those which do not wish to use the full depth available. In any case, it is absolutely essential that back thoroughfares running parallel to the main shopping streets should provide easy access for delivery of goods, a limitation which in many existing shopping centres is one of the principal causes of traffic congestion.

"For the main shopping centres there are only two major planning principles to be regarded here. First, main traffic should be routed clear of them, and second, properly designed and adequate parking places should be provided at each centre." (2). There are a good many motorists, pedestrians and shopkeepers who would echo these sentiments with a warmth which has not yet been translated into visible action in many towns.

The degree to which shopping is done by car varies very widely according to the type of town and shopping centre. Parking facilities are already very seriously in arrears, and there is an unfortunate tendency to plan them at best to catch up with arrears when they should be planned at least 10 years ahead. Here again is a typical example of the fact that economic factors change far more quickly than the results of planning and a further reason why town planners must be guided by long-term policies based on the best factual information available. Car parks should be located as close as possible to the main shopping centre, and several small parks will generally be better than one very large one. There is no doubt that the feeling that they are utilising valuable land is one of the factors which has prevented the provision of efficient parking facilities in the past. It is, however, general experience that conveniently situated car parks earn a profit over their running costs and interest on capital with charges no higher than 6d. per car for periods of two hours (or often longer). Town planners frequently demand factors which they can use as a basis for their highly complicated and necessarily somewhat empirical activities. Such factors are very dangerous for the reason already drafted, that there are enormous variations according to local conditions and, moreover, that conditions change very rapidly. At the same time it may be of some guide to suggest that the aim should be to provide parking facilities for 20 cars for every 100 feet of main-street shop frontage. (3)

Control of Shops.

An insidious danger is that planning may be used to influence matters which are best left to be settled either by consumers or, as a direct issue, by the Government. It is for instance probably true that the number of shops in the country as a whole is excessive. (4) At the same time town planning should not be used as a method of reducing the number of shops by providing for only a limited number. Moreover, there are comparatively rapid changes in the channels through which goods are distributed, and no attempt should be made to provide for specific numbers of any particular type of shop.

There are already some examples of plans for shopping centres which are causing grave concern to the retail trade, one being the Plymouth plan. (5) "The middle way between indiscriminate development of ugly and untidy shopping streets on the one hand and big blocks of compound stores under the direction of local administrators on the other is no easy one. Perhaps in the Plymouth plan . . . the balance has been weighed down somewhat too much on the side of the latter." The limitations which it may place on the number of local and "street" shops may need to be re-examined, and excessive regimentation of the retail trade may be difficult to effect without injustice and above all without inconvenience to shoppers. If, for instance, such regimentation has the effect of driving some of the larger national multiples away from Plymouth, it will not be in the interests of Plymouth.

Subsidiary Street Shops.

The future of subsidiary street shops is bound to give great difficulty. There are, from the æsthetic point of view, few drearier sights than the assortment of dowdy shops spread out at irregular intervals along subsidiary streets as they straggle through the outskirts of a town. There is, of course, no reason why small shops should be "dowdy," and many are not. Against this, the "shop round the corner" has a strongly entrenched position in every urban community. An inquiry by the Society of Women Housing Managers (1942) into shopping needs and habits indicated that proximity to shops was a secondary consideration to many housewives, and "preference," i.e., as regards type of shop, kind of goods obtainable and quality of service, governed the choice of the shops visited. On tenants answering the inquiry, 60 per cent. said they thought over a quarter of a mile was a reasonable distance to walk to the nearest shops, and 18 per cent. were willing to go over half a mile. The Retailers' Advisory Committee on Town Planning recommended that in urban residential districts shopping centres should be located at intervals of about half to three-quarters of a mile, so that every consumer should live within a few hundred yards of one or other group of shops. A similar line has been taken by P E P and the Association for Planning and Regional Reconstruction.

The solution of the subsidiary street shop problem seems to lie along the lines of very careful planning of secondary shopping centres which will keep shops together to the benefit both of shopkeepers and of customers, prevent the growth of straggling shops in subsidiary streets and at the same time preserve the personal feeling between shopkeeper and customer.

This raises the question of shops in the neighbourhood unit rather than the larger community or regional unit able to support a main shopping centre. The minimum economic size for such a unit is probably a population of about 5,000 able to support a secondary shopping centre of say 20 shops. It has, however, been pointed out that the danger of this trend is that it may, in fact, result in limitation of the number of shops in these secondary centres, whether to 20 or to any other number. If so, there will be grave danger of limiting competition, which would certainly not be in the interests of consumers.

Synchronising Shops with Housing.

A very real difficulty arises in attempting to synchronise the provision of shop-

(2) Greater London Plan, 1944, by Sir Patrick Abercrombie. H.M.S.O., 1945, p. 119.

(3) See "The Planning of Shopping Areas," Retail Advisory Committee on Town Planning, 1944, Appendix B.

(4) The number of retail shops in England and Wales according to the 1931 Census was 575,300, which gives a population of 70 per shop,

Category of Shops.	No. of Shops.	No. of Employees.
Co-operatives	24,000	180,000
Multiples	40,000	350,000
Department stores ...	500	150,000
Independents	680,500	1,300,000
	745,000	1,980,000

(5) A Plan for Plymouth: Report prepared for the City Council by J. Paton Watson and Patrick Abercrombie. Underhill (Plymouth), Ltd., 1943. See also Economist 1.7.44, page 10.

ping facilities with the provision of housing. Shops cannot exist without customers, and the houses have got to come first; on the other hand, unless shops are opened as soon as there is a market, serious inconvenience to customers may be caused. If a neighbourhood unit is planned so that there is a market, and if adequate provision for shops is made by the town planners, private enterprise can be left to ensure that the shops are established.

The question of town planning in relation to the wholesale trades is primarily a problem for metropolitan or other very large towns. The dislocation particularly of traffic arising from markets such as Covent Garden, Smithfield and Billingsgate is too well-known to require elaboration. It is suggested in the County of London Plan that the main markets should be decentralised, since they were located originally in relation to the population they served, while to-day they are remote from the large population of the outer areas. It is recommended that the activities and trade of the main central markets, particularly Covent Garden, should, where possible, be reduced in scale and that a considerable proportion of the trade should be decentralised to at least three new points nearer the periphery of the County area, at the same time maintaining close co-ordination with goods railways and main roads. Wholesale markets often play a very important role in fixing prices elsewhere in the country which is one reason why such a policy of decentralisation (which sounds eminently sensible) may not work in practice—and did not work when tried in the U.S.A.

In mentioning wholesale markets it is as well not to forget the importance of retail markets in medium-sized towns. This refers not so much to street markets but to the well-established retail markets with permanent stalls. A survey indicated that in certain towns such as Derby the permanent Market Hall plays a very important part in the retail trade of the town. There are in the case of Derby 160 shops and stalls which are open all the week (though a high proportion of the total trade is done on two days). Most of the shops are butchers, grocers and greengrocers, but there are other trades including, for instance, jewellers and newsagents.

Conclusion.

In conclusion, the main points to stress are that economic habits change fairly quickly, and that town planning needs to provide for much greater flexibility than has hitherto been the case. Not all change is for the good, but it is dangerous to frustrate change. Change always produces untidiness and waste. The town planner tends to try to eliminate untidiness and to stabilise at a high level. The objective, so far as commercial requirements are concerned, should be to eliminate untidiness so far as possible but not to aim at stability. Greater attention might also be given to attempting to foresee changes in social and economic habits and to provide for them.

Silver Jubilee for Saver.

Working in the Westminster Head Office of Messrs. John Mowlem, Ltd., the building contractors, Mr. W. H. Lawrence has just celebrated his silver jubilee as a savings collector. Since 1921 he has been given savings by 60 to 70 people each week, money amounting now to more than £22,000. And throughout the 25 years only £109 have been withdrawn, less than £5 a year.

HOUSE TENDER PRICES

MINISTER OF HEALTH'S LETTER TO NATIONAL FEDERATION

The Minister of Health, Mr. Aneurin Bevan, has sent the following letter (dated January 11) to Mr. G. W. C. Buchanan, C.B.E. (President of the National Federation of Building Trades Employers) :—

DEAR MR. BUCHANAN,—You told me when we met the other day that house building contractors who tender for houses for Local Authorities were very concerned because they were being blamed for high tender prices for which they were not responsible.

I certainly have no intention of blaming them: on the contrary, I am deeply appreciative of the co-operation which I am receiving from the members of your Federation in starting our national housing drive under conditions which I know are exceptionally difficult for house-building.

I am sure our interests are the same in this matter. I want large numbers of houses and I am sure the members of your Federation want to build them. To ensure the success of our programme we must get a reduction in the present high cost of building, and I am glad to know, as I believed would be the case, that you are equally anxious to get this reduction.

On this question of prices I can put my position quite shortly. I must withhold my approval when the tender seems to me too high. Tenders may be too high because the tenderer has taken too pessimistic a view of his capacity to build houses, or because he has been asked to build too elaborate a house. Sometimes it may be a combination of the two reasons. I am confident that as more experience is gained, that pessimism will be vanquished and that the standards to which houses can be built will be more accurately gauged before tenders are obtained. I have already advised Local Authorities that, while I want good houses, extravagance must be avoided. The inclusion of "frills" gives unnecessary work for all concerned and results in delay at a time when speed is essential. I shall continue to emphasise this point.

There are bound to be some growing pains at the start, but the fact that tenders have been approved for over 30,000 houses and tenders for only 3,000 houses have been rejected is, I think, good evidence that throughout the country in general my Department, the Local Authorities and builders are co-operating well and making a good start under conditions which are none too easy for any of us.

We shall get on faster and more easily as we go along and I am grateful to your Federation for the help they are giving me. I am sure, as I have already said, that in the execution of this national housing programme the builders and I have a common purpose, and if at any time you think that further discussion would be helpful I should be only too pleased to see you.

I mentioned, when we met, the concern I felt about the absorption of building labour on unessential repairs and maintenance, and the difficulty of attracting such labour in sufficient numbers to new house building. We are already experiencing this difficulty, and unless action is taken it will be much more serious when the outdoor building season really begins and the number of houses in approved tenders is stepped up, as it will be, very materially, in the course of the next two or three months.

I am sure that your Federation will share my views that it is essential that an adequate quota from the building force should be available for new house building, and apart from any action which the Government may find it necessary to take, I think you may wish to consider what action can be taken within the industry to facilitate our common object.

I shall be glad to have any suggestions you would care to make.

Yours sincerely,
ANEURIN BEVAN.

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BELGIUM'S OUTPUT OF BUILDING MATERIALS

EXCELLENT progress, we are informed, is being made in Belgium in the production of materials. The country is now preparing to export various materials, including cement. The slackening of controls has also assisted the revival of the building materials industries in Belgium. According to official figures, the production of cement has now reached its pre-war level —namely, 125,000 tons a month. If this output is maintained, Belgium will be in a position to export this material, which is greatly in demand on certain foreign markets.

The manufacture of window glass, which was at vanishing point in April, 1945, amounted to 1,080,000 sq. ft. in May, 3,240,000 sq. ft. in July and again in August, 5,400,000 sq. ft. in September, and 8,640,000 sq. ft. in October. Between May and October, 12,852,000 sq. ft. of window glass was used for the needs of the homeless. The reconstruction of the country calls for between 65,000,000 and 75,000,000 sq. ft. of window glass.

After restoring free trade in cement, copper and tin, the Belgian Government has now released from control aluminium, cadmium, cobalt, molybdenum and tungsten.

A COMPLIMENTARY LUNCHEON

EX-DIRECTOR OF WOODWORKING HONOURED

A LUNCHEON to MR. R. H. HALL, Director of Woodworking, Ministry of Supply, from March, 1943, to November, 1945, was given by the Timber Consuming Industries at the Savoy Hotel, on Friday, January 11. Sir Cecil Weir, K.B.E., Director-General of Stores, Ministry of Supply, presided, and there was a representative attendance of the leaders of the timber industry and others.

SIR CECIL WEIR said that they at the Ministry were conscious of the fine work that Mr. Hall had done. They knew that without his experience at the helm, his guiding hand and practical common-sense approach to every problem and requirement and his co-ordinating direction at the centre there would have been for the Government a much less effective procurement of vital war requirements, and there would have been for the industry confusion, inequity, waste, delay and unbalanced employment. He regarded Mr. Hall with admiration and affection as a man whose integrity and single-minded devotion to duty were matched by an almost uncanny sureness of touch and administrative skill.

Other tributes were paid to Mr. Hall by Mr. R. W. Mugford, President, E.J.M.A., Mr. Norman Longley, Mr. E. Boot, Chairman, British Door Association, Mr. S. Hobson, and Mr. C. W. Grosvenor, Chairman of the Timber Building Manufacturers' Association.

MR. HALL, in reply, having expressed his deep appreciation of the compliment which had been paid him, reviewed the timber position at considerable length and expressed keen disappointment with the existing state of affairs. The remedy, he said, was to allocate the available raw material to the established trade on a pre-war consumption percentage to present supplies. By the allocation of supplies to the established trade sections almost all difficulties disappeared. Individual firms would have larger stocks to select from in order to avoid waste, and they would be the best check on inflated requirements. If C. to P. issued by departments were kept within their allocation, one firm or another would always be in a position to supply, while the trade associations could always advise holders of permits of firms who still had stocks. Why should these sections of the trade be forced into the wilderness, while others were given advantages denied to them? "I believe," he said, "that the solution is now in your hands. You must get together, as the other trades have got together, as the other sections of our own trade have got together, and take this matter up to the highest authority in the land."

A presentation of a gold pen and pencil was then made to Mr. T. Muir Wilson, Chairman of the Joinery Reconstruction Committee, in recognition of his valuable work. Mr. Wilson acknowledged the gift in a felicitous speech.

Builder's Return from Forces.

Captain Philip Fotheringham-Parker, on release from serving over five years with the East African Forces in Abyssinia, Ceylon and Burma, has returned to his position of managing director of Patman and Fotheringham, Ltd., building contractors, Islington, N.1.

DISPOSAL OF GOVERNMENT SURPLUS

BUILDERS' MATERIAL

THE Ministry of Works has agreed with the National Council of Building Material Producers and the Distributors of Builders' Supplies Joint Council, a scheme for the disposal of surplus builders' materials which are being thrown up by various Departments to the Ministry of Works as surplus. This arrangement covers commodities such as asphalt, bricks, slates, cement, wheelbarrows, rainwater goods, roofing materials, glass, wallboards, sanitary fittings, builders' ironmongery and joinery, fencing and workshop benches.

Materials not required by the Government will first be offered to local authorities for the housing programme. For the remainder, as supplies become available, *bonâ-fide* merchants and producers will be invited, by advertisement in the local or trade press and through trade associations, to apply for catalogues, which will be supplied for a nominal fee, and the goods will be sold by competitive tender.

The Ministry is also prepared to negotiate with manufacturers for them to purchase, in appropriate cases, the whole stock of their commodity remaining after local authority requirements have been met.

The restriction of tendering to producers and recognised distributors is in accordance with the Government's policy to dispose of surplus goods through the normal trade channels in order to ensure fair distribution. To guard against profiteering, the purchasers will have to undertake that the goods are not resold above the current market prices of comparable new goods.

In certain cases the surpluses will be exported. Normally this will be done through the manufacturers or export merchants.

The bulk of Government stocks of goods suitable for housing will, of course, be absorbed by Government Departments themselves or by local authorities, and it is not expected that large quantities of items in short supply will become available to the trade. There will, however, be large quantities of goods which, for various reasons, such as pattern or condition, are not of much use for housing as they stand or which, in view of considerations of transport, have only a local market. There will, for example, be thousands of slow-combustion stoves intended for army huts, miles of asbestos pressure piping and glazed stoneware piping, and thousands of chemical closets.

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JOHNSTONE.—T.C. to proceed shortly with erection of 373 houses at Howwood-rd. housing scheme.

LARGS.—T.C. to proceed with erection of 50 houses in 13 blocks.

WHITBURN.—T.C. planning preparation of housing site at Bog-rd. second development scheme.

FUTURE CONSTRUCTION

CONTRACTS OPEN

For some contracts still open, but not included in this list, see previous issues. Those with an asterisk are advertised in this number. The dates at the heads of paragraphs are those for the submission of tenders; a dagger (†) denotes closing date for applications; the name and address at the end refer to the person from whom particulars may be obtained.

BUILDING

JANUARY 21.

†**Grantham T.C.**—24 houses at New Beacon-rd., No. 2 site. G. H. Dickinson (L.), Housing A. Dep. £2 2s.

JANUARY 22.

†**Luton R.D.C.**—8 houses at Totternhoe-rd., Eaton Bray. E. and S., 73, West Parade, Dunstable. Dep. £2 2s.

JANUARY 23.

†***Tewkesbury T.C.**—22 houses at Priors Park Building estate. Pemberton and Bateman (F. and A.), High-st., Evesham. Dep. £2 2s Tenders by February 15

JANUARY 25.

†**Chepstow U.D.C.**—4 pairs s.d. houses, 3 blocks of 4 houses terrace type, one block of six (terrace), 4 blocks of four (maisonettes), together with road works, etc. A. Gill, C. Dep. £3 3s.

JANUARY 28.

Alsager U.D.C.—22 houses at Wilbraham estate. S. Dep. £2 2s.

Devizes T.C.—12 houses at Brickley-la. site. B.S. Dep. £2 2s

Frome R.D.C.—46 houses at various sites. J. Rogers, Architect, Radstock, nr. Bath. Dep. £1 1s.

†***Ilford T.C.**—(a) 40 houses at Oaks-la.; (b) 10 houses at Colvin-gdns. B.E. and S. Dep. £5 5s. Tenders by February 8.

Liverpool T.C.—Kitchen and canteen at Calder High school. City A. and Director of Housing. Dep. £2 2s.

Pontefract T.C.—Construction of reinforced concrete-covered reservoir. B. and Water E. Dep. £3 3s.

Southport C.B.—84 houses at Site No. 3, Russell-rd. B.E. Dep. £2 2s.

JANUARY 29.

Shipley U.D.C.—50 houses on 2 estates. H. Dawson, Architect and S., Town Hall.

JANUARY 30.

***Bradfield R.D.C.**—7 pairs of houses at Bourne-rd., Pangbourne. W. G. Stanbrook, Architect, Heath-rd., Bradfield. Dep. £2 2s.

JANUARY 31.

***Beds Standing Joint Committee.**—Minor structural works, including painting and decorating at "The Pines," Goldington-rd., Bedford.

***Godmanchester T.C.**—10 houses at Grove housing estate. F. G. Lane, B.E. and S. Dep. £2 2s.

Morpeth T.C.—30 houses at Stobbing-gate. B.S. Dep. £2 2s.

†***Penzance T.C.**—60 houses and 9 old persons' dwellings at Trencere estate. T.C. Dep. £2 2s.

Street U.D.C.—22 houses at 2 sites. N. H. N. Darby, Architect, Westminster Bank-chbrs., Taunton. Dep. £2 2s.

Tyldesley U.D.C.—40 houses at Astley-st. site, No. 2. N. Chamberlain, F.S.I., E. and S. Dep. £3 3s.

***Warwick T.C.**—20 houses at Stratford-rd. housing scheme. R. Wormell, A.M.I.C.E., B.E. and S. Dep. £3 3s.

FEBRUARY 1.

Southborough U.D.C.—11 houses at Manor-rd. site. C., Council Offices. Dep. £2 2s. Plans

seen at office of Howes and Jackman (FF.), 1, Verulam-bldgs., Grays Inn, W.C.1.

Wood Green B.C.—Adaptation of N.F.S. huts as Ten temporary dwellings at New-rd. B. E. and S. Dep. £1 1s.

FEBRUARY 2.

Ashby-de-la-Zouch.—(1) Roads and sewers at Heather and Ravenstone; (2) 32 houses at Heather and Ravenstone. Leonard Swanwick, M.Inst.R.A., 44, London-rd., Coalville. Dep. £2 2s.

Newmarket R.D.C.—42 houses at various sites. L. I. Cockerham (L.), Council Offices, Park-la., Newmarket. Dep. £3 3s.

***Petersfield U.D.C.**—7 blocks of 4 flats and 6 blocks of houses at Cranford-rd. S., Town Hall. Dep. £2 2s.

Salop C.C.—(a) Dining room and domestic science centre at Bridgnorth Grammar school; (b) canteen kitchen and enlargement of dining hall at Oswestry Boys' High school. A. G. Chant, County A., 5, Belmont, Shrewsbury. Dep. £2 2s.

Tavistock U.D.C.—28 houses, Crelake housing scheme No. 1. W. E. Colston, S. Dep. £5 5s.

FEBRUARY 4.

Aled R.D.C.—24 houses and roads and sewers at Trefnant. S., 34, Water-st., Rhyl. Dep. £3 3s.

***Bootle C.B.**—15 houses, Site 13, Williams-ave., Myerscough-ave., Wood-ave., and Aintree-rd. B.E. and S. Dep. £2 2s.

Chelmsford R.D.C.—6 pairs of houses at Brook-la., Galleywood. Estate S. (Room 25). Dep. £2.

***Scunthorpe T.C.**—124 houses at Lincoln-gdns. estate. Buttrick and Buttrick (F. and A.), 43, Oswald-rd., Scunthorpe. Dep. £3 3s.

***Stroud U.D.C.**—24 houses at Ebley. E. and S. Dep. £2 2s.

***Wellington (Salop) U.D.C.**—86 houses at Site A., Arleston. W. S. Bond, F.S.I., Colmore-chrs., 3 Newhall-st., Birmingham, 3. Dep, £2 2s. Tenders by February 4.

West Bridgford U.D.C.—56 houses at Valley-rd. estate. E. and S. Dep. £2 2s.

FEBRUARY 5.

Colne Valley U.D.C.—10 houses and street works at Botham Hall estate, Goliar, and 10 houses and street works at Longlands-rd., Slaithwaite. Lunn, Heppenstall and Lunn, Chartered Architects, 3, Station-rd., Milnsbridge, Huddersfield. Dep. £2 2s. (payable to U.D.C.).

Southwell R.D.C.—(1) 15 pairs of houses and 1 block of 4 houses in 3 groups at Blidworth; (2) 9 pairs of houses and 2 blocks of 4 houses in 3 groups at Farnsfield. S. Cooper, 8, Westgate, Southwell, Notts. Dep. £2 2s. (payable to R.D.C.).

FEBRUARY 6.

***Camelford R.D.C.**—12 houses on 2 sites. Council Offices, Camelford. Dep. £2 2s.

Cranbrook R.D.C.—34 houses on 2 sites. W. Lynn-Thomas, Architect, The Ingles, Hawkhurst. Dep. £2 2s. to the Clerk.

FEBRUARY 7.

Andover T.C.—26 houses at Farr-ave. B.S. Dep. £2 2s.

Honiton R.D.C.—34 houses on various sites. R. W. Sampson. Fortfield-chrs., Sidmouth.

FEBRUARY 11.

***Dunstable T.C.**—30 houses at Beecroft estate. R. R. Hole (L.), B.E. and S. Dep. £3 3s.

***Huntingdon E.C.**—Erection of kitchen and dining room at Huntingdon school. County S. and Architect, Walden House, Huntingdon.

FEBRUARY 12.

Newton Abbot R.D.C.—1 pair of houses, 1 block of three, and 3 blocks of flats on 2 sites. C. Dep. £2 2s.

FEBRUARY 13.

Gosforth U.D.C.—50 houses at Grange-la. Clifford Wyld, M.Inst.M. & Cy.E., E. and S. Dep. £2 2s.

FEBRUARY 16.

Kingsclere and Whitchurch R.D.C.—(1) 4 pairs houses at Ashmansworth; (2) 22 at Whitchurch; (3) 4 at Highclere. Mr. Henshaw (F.), Westminster Bank-chrs., Andover. Dep. £1 1s.

FEBRUARY 18.

Chorley R.D.C.—18 houses at Chorley Old-rd., Whittle-le-Woods. W. Groves, S. Dep. £2 2s.

***Richmond (Surrey) T.C.**—32 houses at Murray-rd., Ham, and 6 houses at Lock-rd., Ham. B.E. Dep. £3 3s.

FEBRUARY 19.

***Bradford T.C.**—Boiler house building at Valley Power Station. Contract "C.47." T. H. Carr, Electrical E. and Manager, City of Bradford Electricity Dept., 27, Bolton-rd., Bradford.

NO DATE.

Maidstone R.D.C.—12 pairs of houses at Howland-rd., Marden. E. and S. Dep. £2 2s.

Northam U.D.C.—102 houses. Applications to A. E. Parry, Architect and S., Council Offices.

Runcorn R.D.C.—16 type N.P.1 houses and 14 N.P.2 at Bridge-la. A. J. King, E. and S.

***Watford T.C.**—44 houses at Riverside-rd. B.E. (Applications as soon as possible.)

MISCELLANEOUS

JANUARY 29.

Kingswood U.D.C.—Demolition and removal of 19 circular concrete water tank bases. S.

JANUARY 31.

Tyldesley U.D.C.—Complete demolition and removal of shelters. E. and S. Dep. £1 1s.

FEBRUARY 2.

Hornchurch U.D.C.—Demolition of 67 houses. Deputy S.

FEBRUARY 7.

Chepping Wycombe T.C.—Demolition of surface and trench shelters, wardens' posts, static water tanks, etc. B.E.

FEBRUARY 11.

***Wrexham T.C.**—Equipment for 158 houses: (1) ranges, grates, etc.; (2) sanitary goods, etc.; (3) gas appliances; (4) door furniture; (5) manufactured joinery, etc. B.E. and S.

PAINTING, ELECTRIC LIGHTING, MATERIALS, ETC.

JANUARY 31.

Cambs C.C.—County S.
Hunts C.C.—County S.
Lambeth B.C.—B.E. and S.

FEBRUARY 2.

Banstead U.D.C.—S.
Rainford U.D.C.—S.
Swansea C.B.—B.E. and S.

FEBRUARY 4.

Bridlington T.C.—E. and S.
Cornwall C.C.—County S.
Rhondda U.D.C.—E. and S.
Tyldesley U.D.C.—E. and S.

FEBRUARY 5.

Tottenham B.C.—T.C.

FEBRUARY 9.

East Grinstead U.D.C.—E. and S.

FEBRUARY 11.

Glouc. C.C.—County S.
Kesteven C.C.—County S.

FEBRUARY 16.

Cheshunt U.D.C.—E. and S.
Halifax C.B.—B.E.

FEBRUARY 22.

Bromley T.C.—B.E.

FEBRUARY 25.

Northumberland C.C.—County S.

ROADS, SEWERAGE AND WATER WORKS

JANUARY 28.

Ongar R.D.C.—Roads and sewers at Chipping Ongar. S. Dep. £2 2s.

Tynemouth C.B.—Streets and sewers at Broadway "A" site, Cullercoats. B.S. Dep. £2 2s.

JANUARY 30.

Birkenhead C.B.—Roads and sewers. B.E. and S. Dep. £2 2s.

St. Neots R.D.C.—Provision, laying and jointing of approx. 3,000 yds. of 4-in. and 3-in. water mains near Long Stow. Pick, Everard, Keay and Gimson, 6, Millstone-la., Leicester. Dep. £1 1s.

Sunderland C.B.—Construction of Grangetown trunk sewer and sea outfall. B.E. Dep. £5 5s.

JANUARY 31.

Merthyr Tydfil C.B.—Reconstruction of main sewer. Sir Herbert Humphries and McDonald, Consulting E., 369, Birmingham-rd., Wylde Green, Birmingham. Dep. £5 5s.

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FEBRUARY 1.

Mid-Glamorgan Water Board.—Provision and laying of 2,000 lin. yds. of 3 in. dia. and 650 lin. yds. of 6 in. dia. spun cast-iron pipes, etc. Thomas Morgan and Partners, Engineers, 23, Gelliwastad-rd., Pontypridd. Dep. £3 3s.

FEBRUARY 2.

Brighouse T.C.—Roads and sewers, Stoney-la. site. B.E. and S. Dep. £3 3s.

Feltham U.D.C.—Roads and sewers, South Bedfont scheme, Contract No. 1. E. and S. Dep. £2 2s.

Maldon R.D.C.—Roads and sewers, Great Totham. E. and S. Dep. £2 2s.

Upper Stour Valley Main Sewerage Board.—Construction of approx. 1,785 yds. of 10-in. cast-iron pipe sewer, etc. Geo. Plant Deeley, M.Inst.M. & C.E., 13, Church-st., Stourbridge. Dep. £3 3s. (by cheque).

FEBRUARY 4.

Cardiff T.C.—Construction of approx. 400 lin. yds. of 33 in. dia. and 693 lin. yds. of 30 in. dia. concrete tube sewers, etc. City E. Dep. £2 2s.

Ramsey (Hunts) U.D.C.—Roads and sewers at Field-rd. S. Dep. £2 2s.

Stoke-on-Trent B.C.—Roads and sewers at Townsend, No. 2 site, Bucknall. Sir Herbert Humphries and McDonald, Consulting E., 369, Birmingham-rd., Wylde Green, Birmingham. Dep. £3.

FEBRUARY 5.

Martley R.D.C.—Provision, laying and jointing of approximately 5,720 lin. yds. of 12 in. and 9 in. and 6 in. dia. sewers, together with manholes, pumping station, rising main, etc., at Rushwick and Upper Wick. Willcox, Raikes and Marshall, 33, Gt. Charles-st., Birmingham, 3. Dep. £5 5s.

FEBRUARY 8.

Eastleigh T.C.—Road, sewer and drainage works at Chestnut-ave. B.E. Dep. £2 2s.

FEBRUARY 12.

Aireborough U.D.C.—Roads and sewers at Haw-la. and Yeadon Haw. E. and S. Dep. £2 2s.

NO DATE.

Dorking U.D.C.—Roads and sewers, Chart Downs estate. C. Dep. £2 2s.

Hitchin R.D.C.—Roads and sewers at Hinxworth and Kimpton. S. Dep. £2 2s.

PUBLIC APPOINTMENTS

*Full details of Public Appointments marked * are advertised elsewhere in this issue. Those marked † have been advertised in previous issues.*

JANUARY 21.

***Wayland R.D.C.**—Clerk of Works.

JANUARY 24.

***Stratford-on-Avon R.D.C.**—Clerk of Works.
***Sutton Coldfield T.C.**—Architectural Assistant.

JANUARY 25.

***Billesdon R.D.C.**—Clerk of Works.

JANUARY 26.

***Tiverton T.C.**—Clerk of Works.

JANUARY 28.

***Gt. Yarmouth C.B.**—2 Clerks of Works.

JANUARY 29.

†**Overseas Employment.**—(a) Civil Engineers; (b) Sanitary Engineers for Govt. of Burma.

JANUARY 30.

***Barking T.C.**—12 Clerks of Works.
***Scunthorpe T.C.**—Clerk of Works.

JANUARY 31.

***Cambs C.C.**—Assistant Quantity Surveyor.
†**Edmonton T.C.**—Building Works Manager.
†**Edmonton T.C.**—Builders' Clerk.

FEBRUARY 1.

***Acton B.C.**—Senior Architectural Assistant.

FEBRUARY 2.

***Barnes T.C.**—Architectural Assistant.
***Tynemouth C.B.**—(1) 2 Senior Architectural Assistants; (2) Quantity Surveying Assistant; (3) Junior Architectural Assistant; (4) Junior Engineering Assistant; (5) 3 Draughtsmen.

FEBRUARY 4.

***Sittingbourne and Milton U.D.C.**—Clerk of Works.
***West Bromwich C.B.**—Clerk of Works.

FEBRUARY 5.

***Government of Northern Ireland.**—Chief Architect.

FEBRUARY 6.

†**Luton T.C.**—(1) Chief Planning Assistant; (2) Estates and Maintenance Assistant; (3) Architectural Assistant; (4) Architectural Assistant.

FEBRUARY 8.

***Burton-on-Trent C.B.**—General Architectural Assistant.
***Burton-on-Trent C.B.**—Chief Architectural Assistant.
***Croydon C.B.**—Architectural Assistant.
***Middleton T.C.** — (a) Two Engineering Assistants; (b) One Architectural Assistant.

FEBRUARY 10.

†**Control Commission for Germany.**—(a) Civil Engineer experienced in harbour and dock works; (b) Civil Engineers for Roads Branch (Highways and Bridges).

FEBRUARY 11.

‡**University of Liverpool T.C.**—Full-time of Ungraded Lecturer and Studio Instructor at School of Architecture.
***West Bromwich C.B.** — Architectural Assistants.

FEBRUARY 16.

†**Ministry of Town and Country Planning.**—Regional Planning Officer.

FEBRUARY 18.

***National Housing and Town Planning Council.**—Conferences Secretary.

NO DATE.

***Crown Agents for the Colonies.**—Inspector of Works for Government of Zanzibar.

***Crown Agents for the Colonies.**—Inspector of Works, Civil and Waterworks, for Gold Coast Government. P.W.D.

***Overseas Employment.**—Building Inspector for Government of Tanganyika.

GENERAL BUILDING WORK

Bangor, North Wales.—U.D.C. approved 242 houses for aged, and four shops at Coead Mawr estate.

Batley.—T.C. to acquire land at Dark-la and Deighton-la. for housing site.—T.C. approved 66 houses at Healey-la. estate.

Bexley.—T.C. approved plans for 420 houses and flats, at £500,000.

Bolton.—E.C. propose junior and infants' school at Crompton Fold site.

Boughton.—Northamptonshire E.C. propose school kitchen and dining-room, at £1,350.

Chester.—T.C. approved secondary school at Eaton-rd. for Chester Diocesan Education Association.

Coventry.—M. of H. propose to adapt premises at Kirby Corner for Training College for Teachers.

Droitwich.—R.D.C. approved machinery depot at Forge, Hanbury, for War Agricultural Executive Committee.

Gateshead.—Stanley Thompson (Low Fell), Ltd., to erect houses at Shipcote Estate. William Leech, Clayton-st., Newcastle-on-Tyne, to erect houses at Hillcrest estate. B.E. prepared plans for erection of 54 flats at Highfield estate, at £53,660.

Halesowen.—Worcs. E.C. propose primary school at Fatherless Barn estate.

Hartlebury.—Worcestershire E.C. propose central kitchen at Grammar school site.

Hasbury.—Mitchells and Butlers, Ltd., Cape Hill Brewery, Smethwick, propose hotel on site of "Huntingtree House."

Hebburn-on-Tyne.—Cackett, Burns Dick & McKellar, 21, Hilison-pl., Newcastle-on-Tyne, prepared plans for office block at Hedgeley-rd., for Pyrotenax Co., Ltd.

Lancashire.—R.C. propose structural alterations for dining centres at Walter-st. school, Brierfield; **Ramsbottom** schools and Prescot R.C. schools.

Leek.—U.D.C. approved factory for F. Ball & Co., Ltd.

Manchester.—T.C. propose modernisation of Withington Public Baths.—T.C. approved: Additions to works and offices, new boiler-house, etc., at Queen-st. and Corbett-st., Bradford, for E. Shaw & Co., Ltd., Sydney Moss (F.), architect, 13, Portland-rd., Eccles; Button factory at Rylance-st., Ashton Old-rd., Beswick, for S. Weake, J. Gardner & Sons, architects, 76, Cross-st.; J. Buckley, builder, proposes 88 houses at Baguley, H. Hankinson (L.), architect, Union Bank-chbrs., The Downs, Altrincham; Ford Bank Estates, Ltd., builders, 2, Cross-st., propose 141 houses at Didsbury. —Health Committee propose alterations and additions at Withington Hospital, at £17,060; Abergele Sanatorium, at £9,090; Booth Hall Hospital, at £17,125; Crumpsall Hospital, at £30,060; Monsall Hospital, at £14,411; Langho Colony, nr. Blackburn, at £4,715.

Market Bosworth.—R.D.C. approved factory for Churchill Components, Ltd.

Middleton.—T.C. propose 200 houses at Glebe estate; 116 "Orlit" houses at Boarshaw estate.

Newcastle-under-Lyme.—E.C. propose gymnasium and physical culture hall on central site. —T.C. approved: 60 houses at Newcastle-st., Silverdale; for J. Jones (Newcastle, Staffs), Ltd., builder Liverpool-rd. T. J. Madew, Marsh-chbrs., Marsh-parade, architect, for new earthenware factory at Knutton, for R. F. Hassan & Co., Ltd.

Prestwich.—T.C. propose 500 houses at Butterstile estate.

Rochdale.—Health Committee propose extensions to Nurses' Home at Birch Hill Hospital.

Rowley Regis.—T.C. approved 920 houses, 20 bungalows for aged persons, 16 maisonettes and 24 shops at Brickhouse Farm estate.

Salford.—T.C. propose crematorium at Oakwood Park.—T.C. approved: Warehouse, Broughton-rd., Pendleton, for Gourney, Ltd.; offices and stores at Gravel-la., Queen-st., and King-st., for John Faulkner & Sons, Ltd.

Sheffield.—Williams Bros., Ltd., propose buildings at Green-la.

Sunderland.—W. & T. K. Milburn, Fawcett-st., Sunderland, are architects for factory for Leylands Motors, Ltd.

Tynemouth.—North-Eastern Trading Estates, Ltd., Gateshead, to erect factory at West Chirton for Dukes & Marcus, of Kendal, Westmorland.

TENDERS

* Denotes *accepted*.
† Denotes *provisionally accepted*.
‡ Denotes *recommended for acceptance*.
§ Denotes *accepted subject to modification*.
¶ Denotes *accepted by H.M. Government departments*.

Bingley.—21 houses, for R.D.C.: *W. Smith, Bingley, £3,121 (3); *F. W. Heaton (Builders), Ltd., Sandbeds, £17,940 (18).

Bradford.—50 houses at Eccleshill, for T.C. J. T. Castle (A.), City A.: *Bradford Association of Master Buildgrs, West Bar-chbrs., 38, Boar-la., Leeds 1.

Bridgnorth.—40 houses, for T.C. I. M. Nicholson, B.S.: *T. E. Lay & Son, Underhill-st., and *Horne & Meredith, 7, Whitburn-st. (both of Bridgnorth).

Carlton.—42 houses at Burlington-rd., for U.D.C. J. A. West (F.), M.Inst.M. & Cy.E.: *Harper & Green, Ltd., St. Austins-dr., Carlton, £42,177.

Carlisle.—80 houses at Wigton estate: *John Laing & Son, Ltd., Dalston-rd., Carlisle.

Caterham and Warlingham.—Four houses at Harrow-rd., and completion of two houses at Harrow-rd., for U.D.C.: *East Surrey Contractors, 458, Brighton-rd., South Croydon, £4,476 and £610.

Chester.—24 houses at Christleton, for R.D.C.: *Holland & Hannen and Cubitts, Ltd., 1, Queen Anne's gate, London, S.W.1, £27,960.

Droitwich.—10 houses at Stalls Farm estate, for T.C. G. L. Robinson, B.S.: *Evans & Co., Union-bldgs., Droitwich, £10,684.

East Retford.—50 houses, for R.D.C.: (26) *Dorrington & Son, Spital-ter., Gainsborough, £29,600; (24) *Mervyn Clark, Ordsall Park-rd., Retford, £25,615.

Finchale (Co. Durham).—Large extensions at Finchale Disabled Soldiers' Hospital: *Thompson & Son, Church-chase, Chester-le-Street, Co. Durham.

Frome.—37 houses on three sites, for U.D.C. B. H. Parkes, S., 22, Christchurch-st. West: *Frome Master Builders' Association, S. M. R. Henley, Secretary, Christchurch-st. East, Frome, £44,420.

Godalming.—10 bungalows at Silo Wood estate, Farncombe, for T.C. B.E. & S.: *Johnson & Son (Liphook), Ltd., Liphook, £5,985.

Heywood.—24 houses at Gooden Farm estate. A. Middleton, B.S.: *E. F. Davis, Ltd., Bankside, Farnworth, nr. Bolton.

Ilkeston.—122 houses at Calmanhay estate, for T.C. A. O. Marshall, B.S.: *F. Sisson & Sons, Ltd., 32, Cromford-rd., Langley Mill, Nottingham, £142,088.

Keighley.—46 houses and four bungalows at Bracken Bank estate: ‡W. Birch, Ltd., Harrogate, £61,457.

Kettering.—Four houses at Cranford, for R.D.C. S. Wallis, S.: *A. W. Amberry, Newton-rd., Geddington, Kettering, £7,270.

Kidderminster.—38 houses and site works at three sites, for R.D.C. A. S. Northover, Building S. & E. (Bliss Gate & Low Habberley): *Lacy Bros., Adam-st., Kidderminster; (Far Forest): *W. T. Bushell, 69, Addison-rd., Birmingham 14.

Kings Lynn.—20 houses and 12 flats, for T.C. N. Wheatley, B.S.: *Jaques & Greeves, Ltd., 28, Springfield-la., Doncaster, £31,919.

Leamington Spa.—20 houses at Shrubland Hall estate, for T.C.: ‡Walter Hill, Ltd., £24,175 (subject to any M.H. deductions).

Leeds.—Adaptation of Block 4, St. James's Hospital (North) into Maternity Isolation Unit and Infirm Wards, for T.C. H. R. Hudson, F.I.A.S., M.R.San.I., Superintendent of Works & Buildings, 125, Beckett-st., Leeds, 9: *S. Flockton, Ltd., St. Agnes Mount Works, Stoney Rock-la., Leeds 9, £5,900.

Lexden and Winstree.—Eight Swedish houses and all works: *Joseph Moss & Son, £11,250.

¶London (Air Ministry).—List of contracts to value of £500 or over for week ended January 12:—

General maintenance work: David Nairn & Son, Ladybank, Fife; Alex. Hall & Son (Builders), Ltd., Aberdeen; W. Foster & Sons, Grantham; F. Shepherd & Son, Ltd., York; Henry Kelly (Contractors), Ltd., Newcastle-on-Tyne; Walter Lawrence & Son, Ltd., London, E.C.2; Pochins (Manchester), Ltd., Bowden, Cheshire. *Heating and hot water installation*: Wm. Freer, Ltd., London, W.C.1; G. N. Haden, Ltd., London, W.C.1; Norris Warming Co., London, W.C.1. *Electrical Work*: City Electrical Co., Ltd., London, W.C.1. *Building Work*: A. & B. Hanson, Ltd., Southall, Middx.

¶London (M.O.W.).—Contracts placed by M.O.W. during week ended January 3:—

London: Woolwich B.C., Seco houses, Henry Kent (Builders), Ltd., 51, Beacon-rd., S.E.13; Woolwich B.C. 7, Seco houses, Lavender, McMillan, 54, Cheam Common-rd., Worcester Park, Surrey. *Angus*: Dundee, Boilers and ancillary plant, Stockton Chemical Engineers & Riley Boilers, Ltd., Perseverance Works, Stockton-on-Tees. *Beds*: Bedford, Tubular Framed shed, etc., Steel Scaffolding Co., Ltd., 32, Victoria-street, S.W.1. *Cambs*: Chesterton, Seco houses and roads, Winton Hayes, Ltd., Boddington Works, Biggleswade, Bedford. *Ches*: Stockport 1A, Arcon houses, Thomas Davies (Contractors), Ltd., Croft Mill, Turncroft-la., Stockport. *Lancashire*: Blackburn, Dining-room and kitchen at Roe Lee Park school, Wm. Livesey & Sons, Ltd., Nova Scotia Saw Mills, Blackburn. *Leicester*: Blaby R.D.C. 1, Spooner houses, Sherriff & Co. (1943), Ltd., Gipsy-la. Works, Leicester. *Middx*: Northwood, Kitchen at Junior school, Lemairie Bros., Ltd., 70, High-st., Bushey. *Somerset*: Bedminster, Housing sites, Wm. Cowlin & Sons, Ltd., Stratton-st., Bristol 2. *Surrey*: Banstead U.D.C., Seco houses, Wates, Ltd., 1258, London-rd., Norbury, S.W.16. *Sussex*: Eastbourne C.B. 1, Seco houses, Ringmer Building Works, Ltd., Ringmer, Lewes, Sussex. *Yorks*: Hebden Royd and Hepton R.D.C. 1, Tarran houses, J. B. Brooke & Sons, Ltd., 264, Manchester-rd., Huddersfield.

¶London (War Dept.).—Works contracts placed by War Dept., for week ended January 5:—

Beds: Miscellaneous work, Luton Building Co., Ltd., Luton. *Glam*: Miscellaneous work, G. F. Grashoff & Sons, Cardiff; *Kent*: Miscellaneous work, F. Parham, Ltd., Gillingham, Kent.

Luton.—Four pairs of houses off Luton-rd., Toddington, for R.D.C. Peter Dunham (A): *Trew Bros., Luton, Beds, £8,902.

Manchester.—64 houses at Parkwood estate, Wythenshawe, for Housing Committee. J. Hughes (F.), Housing Director, Town Hall: *Direct Works Section, Manchester Corporation, £56,879.

Middlesbrough.—43 houses at Maldon-rd.: *J. Gilmore, West-la., Linthorpe, Middlesbrough; 10 houses at Easterside-rd. Kitching & Co., 40, Albert-rd., Middlesbrough, architects: *G. Bensley, Middlesbrough. Nine pairs of bungalows at Holbeck-av. and Belmont-av.: *T. Duncanson, Beechwood, Acklam, Middlesbrough.

Middlewich.—20 houses at Hayhurst-av., for U.D.C. R. J. B. Wilkinson, S.: *Birchall Bros., Darlington-st., Middlewich, Ches, £19,950.

Morley.—52 houses including electrical works, for T.C.: *Morley and District Building Trades Association, 52, Albion-st., Morley, nr. Leeds, £57,686.

Ogwen (N. Wales).—Eight Swedish timber houses at Tregarth and Talybont, including site works, brick walls, for R.D.C.: *William Evans & Co., Station-rd., Pentraeth, Bangor, £3,062.

Oldham.—Works for T.C. A. L. Hobson, B.E. 40 houses at Stoneleigh No. 2 and Strinesdale sites: *William Eaves & Co., Ltd., Vicarage-la., Marton, Blackpool, £45,150; buildings at Harrison-st., as extensions to Technical College: *J. & J. Blunn, Ashton-rd., Oldham, £2,400.

Ormskirk.—52 houses at Tower Hill site, for U.D.C. E. W. Fryer, S.: *R. T. Barton & Sons, Ltd., 15, Hadfield-rd., Ainsdale, Southport, £47,060.

Pontefract.—160 houses at Chequerfield site, for T.C. E. Gordon Crofts (L.), architect, Market-pl: *W. H. Young (Ackworth), Ltd., Wakefield-rd., Ackworth, nr. Pontefract, £172,439 10s.

Repton.—92 houses at Linton, for R.D.C.: *J. G. Grewcock, Burton-rd., Woodville, Swadlincote, Burton-on-Trent, £99,654.

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Rowley Regis.—48 houses at City-rd., Oakham, for T.C. A. T. & Bertram Butler (FF.), 31, Priory-st., Dudley: *J. Harper & Sons (Blackheath), Ltd., Beeches-rd., Blackheath, Birmingham.

Rugeley.—16 houses at Birch-la., Bereton, for U.D.C. E. J. James, S.: *Sabin & Young, Ltd., Pelsall-la., Rushall, Walsall, £16,960.

Rugby.—Nine houses at Monks Kirby, for R.D.C. D. G. McVinnie, S., 24, Warwick-st.: *F. Cooke, Broughton Astley, Leicester, £12,377.

Sheffield.—Works for T.C. W. George Davies (F.), City A. Meals kitchen at High Storrs Grammar school: *D. O'Neill & Sons, Ltd., Solly-st., £2,138; 142 non-parlour type houses at Parson Cross estate (part 2, Section 5/1: *Reeves Charlesworth, Ltd., Holme-la., Owlerton, £139,956.

Slough.—54 houses at Stoke Poges-la (East) site, for T.C.: *Y. J. Lovell & Son, Ltd., Gerrards Cross.

Stockport.—Works for T.C. W. F. Gardner, B.S. Prefabricated building at Pendlebury Hall, for Junior Technical school: *Hibbert & Penn, Ltd., Clywdd-av., Edgeley, Stockport, £2,500; 16 flats at Didsbury-rd.: *Jonathon Partington, Ltd., Middleton Junction, Middleton, Manchester (in lieu of tender previously accepted): £20,001; 50 houses at Bridge Hall: *F. W. Farley & Son, 129, Longford-rd. West, Reddish, Stockport, £48,350; 50 houses at Bridge Hall: *James Crosby & Sons, Ltd., "Carrwood," Hale, Ches, £48,550.

Stockton-on-Tees.—100 houses at Darlington-la., for B.C. P. F. Burridge (A.), Boro' A., 124, High-st.: *Lane Fox & Co., Ltd., Norton Hill House, Norton-rd., Stockton-on-Tees, £108,032

Sunderland.—Rebuilding a factory for Hartley Wood, Ltd.: *Jos. Huntley & Son, Marion-st., Sunderland.

Tarvin.—Works for R.D.C. T. Pritchard, S., Chester. Sixteen houses at Tattenhall and 10 at Duddon and Tarvin: *J. Wright, Huxley, Chester, £26,322; four houses at Normansheath, and six houses at Tilston: *Harry Jones, £14,280 (in lieu of tenders previously accepted).

Thingoe (Suffolk).—24 houses and four bungalows at Hargrave, Nowton and Bradfield, for R.D.C.: *L. C. J. Sewell & Son, Ltd., £32,000.

Tywcelyn.—41 houses, for R.D.C.: *Parry & Hughes, Cemaes, £18,749 (18): *Parry Bros., Llangefni, £14,956 (14); *Williams & Parry, Tyn-y-Gongl, £9,856 (9).

Wallsend.—20 houses at Westmoreland estate, for T.C.: *Direct Labour (subject to M.H. approval).

Ulverston.—18 houses for U.D.C.: *Baker & Foster, 2, Upper Brook-st., Ulverston.

West Hartlepool.—52 houses and 40 bungalows at Seaton-la. estate, for T.C. F. Durkin, B.E.: *C. M. Yuill, Ltd., Villiers-st., West Hartlepool (in lieu of previous tender withdrawn).

West Lancashire.—Works for R.D.C. R. Losbotham, S. Council Offices, Derby-rd, Ormskirk; four houses at Holmeswood: *P. Barron & Sons, Hesketh-la., Tarleton, nr. Preston, £4,269; eight at Drummersdale, Scarisbrick: *J. & R. Woods, Burscough, Ormskirk, £8,512.

Whitley Bay.—26 houses at Roker-av., for U.D.C. J. A. Bowden, S.: *R. W. Carlyle, Priory-bldgs., Tynemouth, £25,987.

Wores.—Police houses, for C. C. S. N. Cooke (F.), architect, Sun-bldgs., Bennetts-hill, Birmingham, Wythall: *E. A. Turner, Ltd., Maypole-la., King's Heath, Birmingham 14; Stourport-on-Severn: *G. Bourne, 30, Alexandra-av., Droitwich.

Wymondham.—Eight houses at Silfield estate and four at Suton, for U.D.C. R. O. Bond (F.), Architect, Mountergate, Norwich: *K. G. Carter, Ltd., Drayton, Norwich (Silfield), £8,558; (Suton), £4,400.

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